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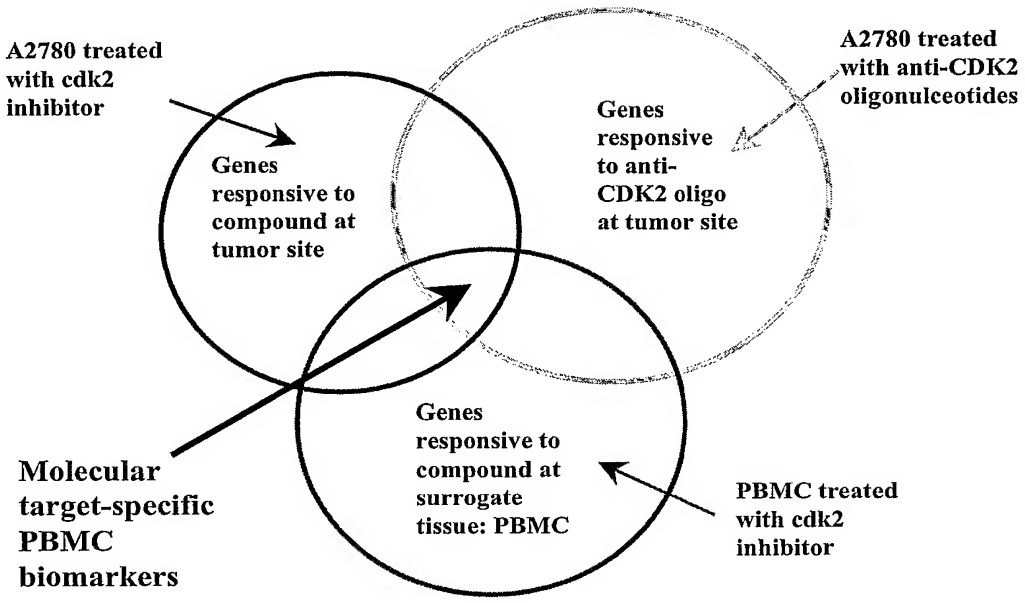
(54) Title: BIOMARKERS OF CYCLIN-DEPENDENT KINASE MODULATION



(57) Abstract: Biomarkers having expression patterns that correlate with a response of cells to treatment with one or more cdk modulating agents, and uses thereof. Also provided are methods for testing or predicting whether a mammal will respond therapeutically to a method of treating cancer that comprises administering an agent that modulates cdk activity.

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BIOMARKERS OF CYCLIN-DEPENDENT KINASE MODULATION

SEQUENCE LISTING:

The present application includes a Sequence Listing. A compact disc labeled "COPY 1 - SEQUENCE LISTING PART" contains the Sequence Listing as D0310 PCT.sequence listing.ST25.txt. The Sequence Listing is 13394 KB in size and was recorded on July 28, 2004. The compact disc is 1 of 3 compact discs. Duplicate copies of the compact disc are labeled "COPY 2 - SEQUENCE LISTING PART" and "COPY 3 - SEQUENCE LISTING PART." Also included is a computer readable form of the Sequence Listing.

The compact disc and duplicate copies are identical and are hereby incorporated by reference into the present application.

BACKGROUND OF THE INVENTION:

The present invention relates generally to the field of pharmacogenomics and, more specifically, to pharmacodynamic biomarkers whose expression patterns correlate with a response of cells to treatment with one or more cdk modulating agents.

Uncontrolled proliferation is a hallmark of cancer cells. Over the past two decades, it has become increasingly clear that the molecules, which directly control cell cycle progression, accumulate defects during tumorigenesis. These defects can result in the loss of checkpoint control and/or the inappropriate activation of the drivers of cell cycle progression, the cyclin-dependent kinases (referred to as "cdks" or "CDKs"). Misregulation of cdk function occurs with high frequency in major solid tumor types (including breast, colon, ovarian, prostate, and NSCL carcinomas). Therefore, inhibitors of cdks and cell cycle progression have the potential to fill a large therapeutic need.

The cdks are serine/threonine protein kinases that are the driving force behind the cell cycle and cell proliferation. Cdks are multisubunit enzymes composed of at least a catalytic subunit and a regulatory (cyclin) subunit. Morgan, D. O., Nature 1995; 374:131-134. To date, nine cdks (cdk1 through cdk9) and eleven cyclin subunits have been identified which can form in excess of thirteen active kinase complexes. Gould, K. L. (1994) in Protein Kinases (Woodgett, J. R., ed), pp. 149-

166, Oxford University Press, Oxford. In normal cells, many of these enzymes can be categorized as G1, S, or G2/M phase enzymes which perform distinct roles in cell cycle progression. van den Heuvel, S., and Harlow, E., Science 1993; 262: 2050-2054. Cdks phosphorylate and modulate the activity of a variety of cellular proteins that include tumor suppressors (e.g., RB, p53), transcription factors (e.g., E2F-DP1, RNA pol II), replication factors (e.g., DNA pol α, replication protein A), and organizational factors which influence cellular and chromatin structures (e.g., Histone HI, lamin A, MAP4). Nigg, E. A., Trends in Cell Biology 1993; 3:296-301; Rickert, P. et al., Oncogene 1996; 12:2631-2640; Dynlacht, B. D. et al., Mol Cell Biol 1997; 17:3867-3875; Ookata, K. et al., Biochemistry 1997; 36:15873-15883.

Cdk activity is regulated through a variety of co-ordinated mechanisms, which include cell cycle dependent transcription and translation, cell cycle dependent proteolysis, subcellular localization, post-translational modifications, and interaction with cdk inhibitor proteins (referred to as "CKIs"). Pines, J., and Hunter, T., Cell 1989; 58:833-846; King, R. W. et al., Science 1996; 274:1652-1659; Li, J. et al., Proc Natl Acad Sci U S A 1997; 94:502-507; Draetta, G., and Beach, D., Cell 1988; 54:17-26; Harper, J. W., Cancer Surv 1997; 29:91-107. It is through these mechanisms that cell cycle checkpoints are constructed. This realization that checkpoint control is implemented through the regulation of cdk function has made the cdks and their regulatory pathways compelling targets for the development of chemotherapeutic agents. The p27/cdk2/cyclinE/RB checkpoint pathway has been clearly implicated in tumorigenesis.

Numerous reports have demonstrated that both the co-activator, cyclin E, and inhibitor, p27, of cdk2 are either over-expressed or under-expressed respectively in solid tumors. Porter, P. L. et al., Nat Med 1997; 3:222-225; Kitahara, K. et al., Int J Cancer 1995; 62:25-28; Wang, A. et al., J Cancer Res Clin Oncol 1996; 122:122-126; Keyomarsi, K. et al., Cancer Res 1994; 54:380-385; Courjal, F. et al. Int J Cancer 1996; 69:247-253; Akama, Y. et al., Jpn J Cancer Res 1995; 86:617-621; Tan, P. et al., Cancer Res 1997; 57:1259-1263; Catzavelos, C. et al., Nat Med 1997; 3:227-230; Fredersdorf, S. et al., Proc Natl Acad Sci U S A 1997; 94:6380-6385. Their altered expression has been shown to correlate with increased cdk2 activity levels and poor prognosis.

In the early clinical development of anti-cancer agents, clinical trials are typically designed to evaluate the safety, tolerability, and pharmacokinetics, as well as to identify a suitable dose and schedule for further clinical evaluation. Increasingly, there is a need to also evaluate the pharmacologic effects of novel agents in early clinical trials, particularly in cases where dosing to maximum tolerated doses may not be appropriate. As a result, there is considerable interest in identifying pharmacodynamic (PD) biomarkers that correlate with the pharmacologic modulation of a tumor target. These PD biomarkers may be tumor-specific, but ideally should also be expressed in accessible surrogate tissues such as skin or peripheral blood cells. The identification of these PD biomarkers may be carried out by analyzing changes in specific polypeptides or mRNA, as predicted by the known biology associated with the molecule targeted by the agent of interest. Alternatively, PD biomarkers can be identified by analyzing global changes in polypeptides or mRNA in cells or tissues exposed to efficacious doses of the agent. Once identified, these PD biomarkers can be used to demonstrate the desired pharmacologic modulation (e.g., inhibition) of a tumor target upon the achievement of an appropriate level of agent in the patient.

There remains a need to identify biomarkers whose expression patterns correlate with a response of cells to treatment with one or more cdk modulating agents.

The development of microarray technologies for large scale characterization of mRNA expression pattern has made it possible to systematically search for molecular biomarkers whose expression is modulated by drug treatment. Such technologies and molecular tools have made it possible to monitor the expression level of a large number of transcripts within a cell population at any given time (see, e.g., Schena et al., 1995, Science, 270:467-470; Lockhart et al., 1996, Nature Biotechnology, 14:1675-1680; Blanchard et al., 1996, Nature Biotechnology, 14:1649; U.S. Patent No. 5,569,588).

SUMMARY OF THE INVENTION:

The invention provides methods and procedures for determining patient sensitivity to one or more agents that modulate cyclin-dependent kinase (cdk) activity. The invention also provides methods for determining or predicting whether an

individual requiring therapy for a disease state or disorder such as cancer will or will not respond to treatment, prior to administration of the treatment, wherein the treatment comprises of one or more agents that modulate cdk activity. The one or more agents that modulate cdk activity can be small molecules or biological molecules. In one aspect, the agent is a small molecule that inhibits cyclin-dependent kinase 2 (cdk2)/cyclin E.

The invention also provides a method for testing or predicting whether a mammal will respond therapeutically to a method of treating cancer comprising administering an agent that modulates cdk activity, wherein the method comprises: (a) measuring in the mammal the level of at least one biomarker selected from the biomarkers of Table 1; (b) exposing the mammal to the agent that modulates cdk activity; (c) following the exposing of step (b), measuring in the mammal the level of the at least one biomarker, wherein a difference in the level of the at least one biomarker measured in step (c) compared to the level of the at least one biomarker measured in step (a) indicates that the mammal will respond therapeutically to said method of treating cancer.

The invention also provides a method for determining whether a mammal is responding to an agent that modulates cdk activity, comprising: (a) exposing the mammal to the agent; and (b) following the exposing of step (a), measuring in the mammal the level of at least one biomarker selected from the biomarkers of Table 1, wherein a difference in the level of the at least one biomarker measured in step (b), compared to the level of the at least one biomarker in a mammal that has not been exposed to said agent, indicates that the mammal is responding to the agent that modulates cdk activity.

As used herein, responding includes, for example, a biological response (e.g., a cellular response) or a clinical response (e.g., improved symptoms, a therapeutic effect, or an adverse event) in the mammal.

The invention also provides a method for determining whether a mammal is responding to an agent that modulates cdk activity, comprising: (a) obtaining a biological sample from the mammal; (b) measuring in said biological sample the level of at least one biomarker selected from the biomarkers of Table 1; (c) correlating said level of at least one biomarker with a baseline level; and (d) determining whether the

mammal is responding to an agent that modulates cdk activity based on said correlation.

As used herein, the baseline level used for the correlation can be determined by one of skill in the art. In one aspect, the baseline level is the level of the at least one biomarker selected from the biomarkers of Table 1 in a mammal that has not been exposed to the agent. In another aspect, the baseline level is the level of the at least one biomarker selected from the biomarkers of Table 1 in the mammal that will be treated with a cdk modulating agent but has not yet been exposed to the agent. In yet another aspect, the baseline level is the level of the at least one biomarker selected from the biomarkers of Table 1 in the mammal that has been treated with a cdk modulating agent, and wherein the baseline level is selected at a point during the treatment with the cdk modulating agent. The point can be, for example, an established time period or measurement of a criteria (e.g., a biological or clinical response) set prior to initiation of the treatment.

A difference between the level of at least one biomarker from the mammal and the baseline level that is statistically significant can be used in the methods of the invention. A statistically significant difference between the level of at least one biomarker from the mammal and the baseline level is readily determined by one of skill in the art and can be, for example, at least a two-fold difference, at least a three-fold difference, or at least a four-fold difference in the level of the at least one biomarker.

The invention also provides a method for identifying a mammal that will respond therapeutically to a method of treating cancer comprising administering an agent that modulates cdk activity, wherein the method comprises: (a) measuring in the mammal the level of at least one biomarker selected from the biomarkers of Table 1; (b) exposing a biological sample from the mammal to the agent; (c) following the exposing in step (b), measuring in said biological sample the level of the at least one biomarker, wherein a difference in the level of the at least one biomarker measured in step (c) compared to the level of the at least one biomarker measured in step (a) indicates that the mammal will respond therapeutically to the said method of treating cancer.

As used herein, respond therapeutically refers to the alleviation or abrogation of the cancer. This means that the life expectancy of an individual affected with the cancer will be increased or that one or more of the symptoms of the cancer will be reduced or ameliorated. The term encompasses a reduction in cancerous cell growth or tumor volume. Whether a mammal responds therapeutically can be measured by many methods well known in the art, such as PET imaging.

The invention also provides a method for identifying a mammal that will respond therapeutically to a method of treating cancer comprising administering an agent that modulates cdk activity, wherein the method comprises: (a) exposing a biological sample from the mammal to the agent that modulates cdk activity; (b) following the exposing of step (a), measuring in said biological sample the level of at least one biomarker selected from the biomarkers of Table 1, wherein a difference in the level of the at least one biomarker measured in step (b), compared to the level of the at least one biomarker in a mammal that has not been exposed to said agent that modulates cdk activity, indicates that the mammal will respond therapeutically to said method of treating cancer.

The invention also provides a method for determining whether an agent modulates cdk activity in a mammal, comprising: (a) exposing the mammal to the agent; and (b) following the exposing of step (a), measuring in the mammal the level of at least one biomarker selected from the biomarkers of Table 1, wherein a difference in the level of said biomarker measured in step (b), compared to the level of the biomarker in a mammal that has not been exposed to said agent, indicates that the agent modulates cdk activity in the mammal.

The invention also provides a method for determining whether a mammal has been exposed to an agent that modulates cdk activity, comprising (a) exposing a biological sample from the mammal to the agent; and (b) following the exposing of step (a), measuring in the biological sample the level of at least one biomarker selected from the biomarkers of Table 1, wherein a difference in the level of said biomarker measured in step (b), compared to the level of the biomarker in a mammal that has not been exposed to said agent, indicates that the mammal has been exposed to an agent that modulates cdk activity.

The mammal can be, for example, a human, rat, mouse, dog, rabbit, pig sheep, cow, horse, cat, primate, or monkey.

The method of the invention can be an *in vivo* or an *in vitro* method. In one aspect, the step of measuring in the mammal the level of at least one biomarker is *in vitro* and comprises taking a biological sample from the mammal and then measuring the level of the at least one biomarker in the biological sample. The biological sample can comprise, for example, at least one of whole fresh blood, peripheral blood mononuclear cells, frozen whole blood, fresh plasma, frozen plasma, urine, saliva, skin, hair follicle, bone marrow, or tumor tissue.

In one aspect of the invention, the method of the invention comprises use of the biomarker W28729 (SEQ ID NO:1246).

The level of the at least one biomarker can be, for example, the level of protein and/or mRNA transcript of the at least one biomarker.

The invention also provides an isolated biomarker selected from the biomarkers of Table 1. The biomarkers of the invention comprise sequences selected from the nucleotide and amino acid sequences provided in Table 1 and the Sequence Listing, including fragments and variants thereof.

The invention also provides one or more biomarkers that can serve as targets for the development of therapies for disease treatment. Such targets may be particularly applicable for treatment of cancers or tumors.

The invention also provides a biomarker set comprising two or more biomarkers selected from the biomarkers of Table 1.

The invention also provides kits for determining or predicting whether a patient would be susceptible or resistant to a treatment that comprises one or more agents that modulate cdk activity. In one aspect, the patient has a cancer.

In one aspect, the kit comprises a suitable container that comprises one or more specialized microarrays of the invention, one or more agents that modulate cdk activity for use in testing cells from patient tissue specimens or patient samples, and instructions for use. The kit may further comprise reagents or materials for monitoring the expression of a biomarker set at the level of mRNA or protein.

The invention also provides a kit that comprises two or more biomarkers selected from the biomarkers of Table 1.

The invention also provides a kit that comprises at least one of an antibody and a nucleic acid for detecting the presence of at least one of the biomarkers selected from the biomarkers of Table 1. In one aspect, the kit further comprises instructions for determining whether or not a mammal will respond therapeutically to a method of treating cancer comprising administering an agent that modulates cdk activity. In another aspect, the instructions comprise the steps of (a) measuring in the mammal the level of at least one biomarker selected from the biomarkers of Table 1, (b) exposing the mammal to the agent, (c) following the exposing of step (b), measuring in the mammal the level of the at least one biomarker, wherein a difference in the level of the at least one biomarker measured in step (c) compared to the level of the at least one biomarker measured in step (a) indicates that the mammal will respond therapeutically to said method of treating cancer.

The invention also provides screening assays for determining if a patient will be susceptible or resistant to treatment with one or more agents that modulate cdk activity.

The invention also provides a method of monitoring the treatment of a patient having a disease, wherein said disease is treated by a method comprising administering one or more agents that modulate cdk activity.

The invention also provides individualized genetic profiles which are necessary to treat diseases and disorders based on patient response at a molecular level.

The invention also provides specialized microarrays, e.g., oligonucleotide microarrays or cDNA microarrays, comprising one or more biomarkers having expression profiles that correlate with either sensitivity or resistance to one or more agents that modulate cdk activity.

The invention also provides antibodies, including polyclonal and monoclonal, directed against one or more of the biomarker polypeptides. Such antibodies can be used in a variety of ways, for example, to purify, detect, and target the biomarker polypeptides of the invention, including both in vitro and in vivo diagnostic, detection, screening, and/or therapeutic methods.

The invention also provides a cell culture model to identify biomarkers whose expression levels correlate with cdk modulation.

The invention will be better understood upon a reading of the detailed description of the invention when considered in connection with the accompanying figures.

BRIEF DESCRIPTION OF THE FIGURES:

FIG. 1 illustrates a cdk biomarker identification strategy.

FIGS. 2A and 2B illustrate the reduction of cdk2 protein levels by cdk2 antisense oligonucleotides.

FIGS. 3A, 3B, and 3C illustrate the expression changes of the biomarker W28729 (SEQ ID NO:1246) in A2780s, PBMC, and xenograft A2780s tumors following treatment with a cdk inhibitor.

FIGS. 4A and 4B illustrate the regulation of W28729 expression in A2780 xenograft (FIG. 4A) and the mouse ortholog of W28729 in mouse PBMC (FIG. 4B).

FIGS. 5A and 5B illustrate W28729 gene expression in patients treated with N-5-[[5-(1,1-Dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl-4-piperidinecarboxamide, 0.5-L-tartaric acid salt.

FIGS. 6A and 6B illustrate W28729 induction and its relation to baseline expression.

FIGS. 7A and 7B illustrate W28729 induction as a function of dose (FIG. 7A) and AUC (FIG. 7B).

FIG. 8 illustrates the prediction of W28729 changes by baseline expression of W28729 and the cdk2 inhibitor exposure.

FIG. 9 illustrates disease outcome, time to tumor progression (TTP) and W28729 changes.

DETAILED DESCRIPTION OF THE INVENTION:

As used herein, the term "agent that modulates cdk activity," also referred to herein as "cdk modulating agent," is intended to mean a substance that is a biological molecule or a small molecule, and formulations thereof, that is directly or indirectly involved in cdk activity and/or one or more pathways in which cdk is involved. The cdk modulating agent can be a cdk antagonist or inhibitor. The cdk modulating agent can also be a cdk agonist or activator.

In one aspect, the cdk modulating agent is directly or indirectly involved in cdk2 activity and/or one or more pathways in which cdk2 is involved. In another aspect, the cdk modulating agent is directly or indirectly involved in cdk1 activity and/or one or more pathways in which cdk1 is involved. In yet another aspect, the cdk modulating agent is directly or indirectly involved in cdk4 activity and/or one or more pathways in which cdk4 is involved.

Biological molecules include all lipids and polymers of monosaccharides, amino acids, and nucleotides having a molecular weight greater than 450. Thus, biological molecules include, for example, oligosaccharides and polysaccharides; oligopeptides, polypeptides, peptides, and proteins; and oligonucleotides and polynucleotides. Oligonucleotides and polynucleotides include, for example, DNA and RNA. Biological molecules further include derivatives of any of the molecules described above. For example, derivatives of biological molecules include lipid and glycosylation derivatives of oligopeptides, polypeptides, peptides, and proteins.

In addition to the biological molecules discussed above, the cdk modulating agents may also be small molecules. Any molecule that is not a biological molecule is considered herein to be a small molecule. Some examples of small molecules include organic compounds, organometallic compounds, salts of organic and organometallic compounds, saccharides, amino acids, and nucleotides. Small molecules further include molecules that would otherwise be considered biological molecules, except their molecular weight is not greater than 450. Thus, small molecules may be lipids, oligosaccharides, oligopeptides, and oligonucleotides and their derivatives, having a molecular weight of 450 or less.

It is emphasized that small molecules can have any molecular weight. They are merely called small molecules because they typically have molecular weights less than 450. Small molecules include compounds that are found in nature as well as synthetic compounds. In one embodiment, the cdk modulating agent is a small molecule that inhibits cdk or a pathway in which cdk is involved.

Numerous small molecules have been described as being useful to inhibit cdk including, for example, flavopiridol (Aventis Pharmaceuticals Inc., Bridgewater, New Jersey, U.S.A.) and CYC202 (Cyclacel Limited, Dundee, United Kingdom). Cdk

inhibitors also include, for example, the small molecules disclosed in U.S. Patent Nos. 6,040,321, 6,214,852, 6,262,096, 6,515,004, and 6,521,759.

In one aspect, the cdk modulating agent is a small molecule cdk inhibitor. In another aspect, the cdk modulating agent is a small molecule cdk2 inhibitor. In another aspect, the cdk modulating agent is a small molecule cdk1 inhibitor. In yet another aspect, the cdk modulating agent is a small molecule cdk4 inhibitor. In a further aspect, the cdk modulating agent is N-5-[[5-(1,1-Dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl-4-piperidinecarboxamide, 0.5-L-tartaric acid salt.

The invention provides methods to monitor the response of patients to treatment with a cdk modulating agent. These methods are useful: (i) to follow the response of a patient over a course of treatment with a cdk modulating agent; (ii) to determine whether the specific cdk modulating agent selected for treatment is appropriate to the patient; (iii) to determine whether the dose of the cdk modulating agent being administered is appropriate to the patient; (iv) to determine whether the type and/or amount of cdk modulating agent being administered needs to be changed over the course of the treatment period; (v) to determine when treatment is complete; and (vi) to determine whether treatment that has been terminated needs to be restarted. These methods are also useful to identify whether a patient will benefit from treatment with a cdk modulating agent.

In one aspect, the invention provides a method of determining whether a patient receiving a treatment that comprises a cdk modulating agent has received sufficient treatment to inhibit cdk in the patient's tumors. In accordance with the invention, tumor or surrogate biopsies are obtained from a patient before and after treatment with a cdk modulating agent. The surrogate biopsies can be, for example, skin or peripheral blood. The cells are then assayed to determine the changes in the expression pattern of one or more biomarkers of the invention upon treatment with the cdk modulating agent, to determine whether cdk inhibition has been achieved by the treatment. Success or failure of the treatment can be determined based on the expression pattern of the test cells from the test tissue, e.g., tumor or cancer biopsy, as being relatively the same as or different from the expression pattern of one or more biomarkers. If the test cells show an expression profile which corresponds to that of the biomarker or biomarker set, it is predicted that the individual's cancer or tumor

has been exposed to a concentration of the modulating agent that is sufficient to, in one aspect, inhibit cdk. By contrast, if the test cells show a gene expression pattern that does not correspond to the biomarker or biomarker set, it is predicted that the modulating agent exposure has not been sufficient to, in one aspect, inhibit cdk.

In another aspect, the invention provides a method of monitoring the treatment of a patient having a disease treatable by a cdk modulating agent by comparing the expression profile of cells from a patient tissue sample, e.g., a tumor or cancer biopsy, following treatment to a biomarker or biomarker set. The isolated cells from the patient are assayed to determine their expression pattern to determine if a change of the expression profile has occurred so as to warrant a different treatment, such as treatment with a different cdk modulating agent, or to discontinue current treatment. The resulting expression profile of the cells following treatment with a cdk modulating agent is compared with the expression pattern of the biomarker or biomarker set.

Such a monitoring process can indicate success or failure of a patient's treatment with a cdk modulating agent based on the expression pattern of the cells isolated from the patient's sample as being relatively the same as or different from the expression pattern of the biomarker or biomarker set. Thus, if, after treatment with a cdk modulating agent, the test cells show a change in their expression profile from the biomarker or biomarker set, it can serve as an indicator that the current treatment should be modified, changed, or even discontinued. Such monitoring processes can be repeated as necessary or desired. The monitoring of a patient's response to a given treatment can also involve testing the patient's cells in the assay as described only after treatment with a cdk modulating agent, rather than before and after treatment with a cdk modulating agent.

The invention is based on the identification of specific pharmacodynamic biomarkers of cdk modulation. In accordance with the invention, oligonucleotide microarrays were used to measure the expression levels of a large number of genes in a panel of treated cell lines for which sensitivity to a cdk modulating agent was determined. The determination of the gene expression profiles in the treated cells allowed the identification of biomarkers whose expression levels highly correlate with

the modulation of cdk or a pathway in which cdk is involved. The biomarkers are thus useful for inferring the level of cdk modulation in a patient.

The biomarkers of the invention include polynucleotides, including full-length genes, open reading frames (ORFs), and partial sequences such as expressed sequence tags (ESTs) and structural RNA. In one aspect, the invention is directed to an isolated polynucleotide comprising a nucleotide sequence selected from the nucleotide sequences of Table 1 such as, for example, an isolated polynucleotide comprising the nucleotide sequence of SEQ ID NO:1264. The biomarkers further include polypeptides comprising the amino acid sequences encoded by these polynucleotides. The biomarkers of the invention include those provided below in Table 1. In one aspect, these polynucleotides and polypeptides are in isolated form.

TABLE 1

SEQ ID NO:	Sequence type	Genbank Accession No.	Symbol	Description
1	DNA	NM_005340	HINT1	histidine triad nucleotide binding protein 1
2	Protein	NP_005331	HINT1	histidine triad nucleotide binding protein 1
3	DNA	NM_003137	SRPK1	SFRS protein kinase 1
4	Protein	NP_003128	SRPK1	SFRS protein kinase 1
5	DNA	NM_001951	E2F5	E2F transcription factor 5, p130-binding
6	Protein	NP_001942	E2F5	E2F transcription factor 5, p130-binding
7	DNA	U33838		NF-kappa-B p65delta3, mRNA sequence
8	Protein	U33838 (Translation)		NF-kappa-B p65delta3, mRNA sequence
9	DNA	NM_005195	CEBPD	CCAAT/enhancer binding protein (C/EBP), delta
10	Protein	NP_005186	CEBPD	CCAAT/enhancer binding protein (C/EBP), delta
11	DNA	NM_002916	RFC4	replication factor C (activator 1) 4, 37kDa
12	Protein	NP_002907	RFC4	replication factor C (activator 1) 4, 37kDa
13	DNA	NM_002050	MGC2306	hypothetical protein MGC2306
14	Protein	NP_002041	MGC2306	hypothetical protein MGC2306
15	DNA	NM_032638	MGC2306	hypothetical protein MGC2306
16	Protein	NP_116027	MGC2306	hypothetical protein MGC2306
17	DNA	NM_001709	BDNF	brain-derived neurotrophic factor
18	Protein	NP_001700	BDNF	brain-derived neurotrophic factor
19	DNA	NM_170731	BDNF	brain-derived neurotrophic factor

20	Protein	NP_733927	BDNF	brain-derived neurotrophic factor
21	DNA	NM_170732	BDNF	brain-derived neurotrophic factor
22	DNA	NM_170733	BDNF	brain-derived neurotrophic factor
23	DNA	NM_006749	SLC20A2	solute carrier family 20 (phosphate transporter), member 2
24	Protein	NP_006740	SLC20A2	solute carrier family 20 (phosphate transporter), member 2
25	DNA	NM_005415	SLC20A1	solute carrier family 20 (phosphate transporter), member 1
26	Protein	NP_005406	SLC20A1	solute carrier family 20 (phosphate transporter), member 1
27	DNA	HG3510-HT3704		V-Erba Related Ear-3 Protein
28	DNA	HG1471-HT3923		Transcription Factor Oct-1a/1b, Alt. Splice 2, Oct-1b
29	DNA	NM_002816	PSMD12	proteasome (prosome, macropain) 26S subunit, non-ATPase, 12
30	Protein	NP_002807	PSMD12	proteasome (prosome, macropain) 26S subunit, non-ATPase, 12
31	DNA	NM_003138	SRPK2	SFRS protein kinase 2
32	Protein	NP_003129	SRPK2	SFRS protein kinase 2
33	DNA	NM_005930	MGEA6	meningioma expressed antigen 6 (coiled-coil proline-rich)
34	Protein	NP_005921	MGEA6	meningioma expressed antigen 6 (coiled-coil proline-rich)
35	DNA	NM_003337	UBE2B	ubiquitin-conjugating enzyme E2B (RAD6 homolog)
36	Protein	NP_003328	UBE2B	ubiquitin-conjugating enzyme E2B (RAD6 homolog)
37	DNA	NM_003406	YWHAZ	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
38	Protein	NP_003397	YWHAZ	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
39	DNA	NM_145690	YWHAZ	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
40	DNA	NM_006494	ERF	Ets2 repressor factor
41	Protein	NP_006485	ERF	Ets2 repressor factor
42	DNA	NM_006904	PRKDC	protein kinase, DNA-activated, catalytic polypeptide
43	Protein	NP_008835	PRKDC	protein kinase, DNA-activated, catalytic polypeptide

44	DNA	NM_021975	RELA	v-rel reticuloendotheliosis viral oncogene homolog A, nuclear factor of kappa light polypeptide gene enhancer in B-cells 3, p65 (avian)
45	Protein	NP_068810	RELA	v-rel reticuloendotheliosis viral oncogene homolog A, nuclear factor of kappa light polypeptide gene enhancer in B-cells 3, p65 (avian)
46	DNA	NM_004359	CDC34	cell division cycle 34
47	Protein	NP_004350	CDC34	cell division cycle 34
48	DNA	NM_000380	XPA	xeroderma pigmentosum, complementation group A
49	Protein	NP_000371	XPA	xeroderma pigmentosum, complementation group A
50	DNA	NM_004152	OAZ1	ornithine decarboxylase antizyme 1
51	Protein	NP_004143	OAZ1	ornithine decarboxylase antizyme 1
52	DNA	NM_003250	THRA	thyroid hormone receptor, alpha (erythroblastic leukemia viral (v-erb-a) oncogene homolog, avian)
53	Protein	NP_003241	THRA	thyroid hormone receptor, alpha (erythroblastic leukemia viral (v-erb-a) oncogene homolog, avian)
54	DNA	NM_005900	MADH1	MAD, mothers against decapentaplegic homolog 1 (Drosophila)
55	Protein	NP_005891	MADH1	MAD, mothers against decapentaplegic homolog 1 (Drosophila)
56	DNA	NM_004444	EPHB4	EphB4
57	Protein	NP_004435	EPHB4	EphB4
58	DNA	NM_021009	UBC	ubiquitin C
59	Protein	NP_066289	UBC	ubiquitin C
60	DNA	NM_003200	TCF3	transcription factor 3 (E2A immunoglobulin enhancer binding factors E12/E47)
61	Protein	NP_003191	TCF3	transcription factor 3 (E2A immunoglobulin enhancer binding factors E12/E47)
62	DNA	NM_002717	PPP2R2A	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform
63	Protein	NP_002708	PPP2R2A	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform
64	DNA	NM_000358	TGFBI	transforming growth factor, beta-induced, 68kDa
65	Protein	NP_000349	TGFBI	transforming growth factor, beta-induced, 68kDa
66	DNA	NM_001664	ARHA	ras homolog gene family, member A

67	Protein	NP_001655	ARHA	ras homolog gene family, member A
68	DNA	NM_002419	MAP3K11	mitogen-activated protein kinase kinase kinase 11
69	Protein	NP_002410	MAP3K11	mitogen-activated protein kinase kinase kinase 11
70	DNA	NM_004593	SFRS10	splicing factor, arginine/serine-rich 10 (transformer 2 homolog, Drosophila)
71	Protein	NP_004584	SFRS10	splicing factor, arginine/serine-rich 10 (transformer 2 homolog, Drosophila)
72	DNA	NM_003131	SRF	serum response factor (c-fos serum response element-binding transcription factor)
73	Protein	NP_003122	SRF	serum response factor (c-fos serum response element-binding transcription factor)
74	DNA	NM_000376	VDR	vitamin D (1,25-dihydroxyvitamin D3) receptor
75	Protein	NP_000367	VDR	vitamin D (1,25-dihydroxyvitamin D3) receptor
76	DNA	D26561		D26561 /FEATURE=cds#2 /DEFINITION=D26561 Homo sapiens cellular DNA containing a segment of Human papilloma virus type 5b, partial and complete cds
77	Protein	D26561 (Translation)		D26561 /FEATURE=cds#2 /DEFINITION=D26561 Homo sapiens cellular DNA containing a segment of Human papilloma virus type 5b, partial and complete cds
78	DNA	NM_002651	PIK4CB	phosphatidylinositol 4-kinase, catalytic, beta polypeptide
79	Protein	NP_002642	PIK4CB	phosphatidylinositol 4-kinase, catalytic, beta polypeptide
80	DNA	NM_002830	PTPN4	protein tyrosine phosphatase, non-receptor type 4 (megakaryocyte)
81	Protein	NP_002821	PTPN4	protein tyrosine phosphatase, non-receptor type 4 (megakaryocyte)
82	DNA	NM_020529	NFKBIA	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
83	Protein	NP_065390	NFKBIA	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
84	DNA	NM_006292	TSG101	tumor susceptibility gene 101
85	Protein	NP_006283	TSG101	tumor susceptibility gene 101
86	DNA	NM_005375	MYB	v-myb myeloblastosis viral oncogene homolog (avian)
87	Protein	NP_005366	MYB	v-myb myeloblastosis viral oncogene homolog (avian)

88	DNA	NM_002836	PTPRA	protein tyrosine phosphatase, receptor type, A
89	Protein	NP_002827	PTPRA	protein tyrosine phosphatase, receptor type, A
90	DNA	NM_080840	PTPRA	protein tyrosine phosphatase, receptor type, A
91	Protein	NP_543030	PTPRA	protein tyrosine phosphatase, receptor type, A
92	DNA	NM_080841	PTPRA	protein tyrosine phosphatase, receptor type, A
93	DNA	NM_002027	FNTA	farnesyltransferase, CAAX box, alpha
94	Protein	NP_002018	FNTA	farnesyltransferase, CAAX box, alpha
95	DNA	X95152		X95152 /FEATURE=mRNA /DEFINITION=HSBRCA22 H.sapiens brca2 gene exon 2 (and joined coding region)
96	Protein	X95152 (Translation)		X95152 /FEATURE=mRNA /DEFINITION=HSBRCA22 H.sapiens brca2 gene exon 2 (and joined coding region)
97	DNA	NM_016848	SHC3	neuronal Shc
98	Protein	NP_058544	SHC3	neuronal Shc
99	DNA	HG4074-HT4344		Rad2
100	DNA	NM_006119	FGF8	fibroblast growth factor 8 (androgen-induced)
101	Protein	NP_006110	FGF8	fibroblast growth factor 8 (androgen-induced)
102	DNA	NM_033163	FGF8	fibroblast growth factor 8 (androgen-induced)
103	Protein	NP_149353	FGF8	fibroblast growth factor 8 (androgen-induced)
104	DNA	NM_033164	FGF8	fibroblast growth factor 8 (androgen-induced)
105	Protein	NP_149354	FGF8	fibroblast growth factor 8 (androgen-induced)
106	DNA	NM_033165	FGF8	fibroblast growth factor 8 (androgen-induced)
107	Protein	NP_149355	FGF8	fibroblast growth factor 8 (androgen-induced)
108	DNA	NM_000057	BLM	Bloom syndrome
109	Protein	NP_000048	BLM	Bloom syndrome
110	DNA	NM_005778	RBM5	RNA binding motif protein 5
111	Protein	NP_005769	RBM5	RNA binding motif protein 5
112	DNA	NM_001067	TOP2A	topoisomerase (DNA) II alpha 170kDa
113	Protein	NP_001058	TOP2A	topoisomerase (DNA) II alpha 170kDa
114	DNA	NM_003473	STAM	signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
115	Protein	NP_003464	STAM	signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
116	DNA	NM_005354	JUND	jun D proto-oncogene
117	Protein	NP_005345	JUND	jun D proto-oncogene

118	DNA	HG3187-HT3366		Tyrosine Phosphatase 1, Non-Receptor, Alt. Splice 3
119	DNA	NM_006875	PIM2	pim-2 oncogene
120	Protein	NP_006866	PIM2	pim-2 oncogene
121	DNA	NM_004327	BCR	breakpoint cluster region
122	Protein	NP_004318	BCR	breakpoint cluster region
123	DNA	NM_021574	BCR	breakpoint cluster region
124	Protein	NP_067585	BCR	breakpoint cluster region
125	DNA	NM_001969	EIF5	eukaryotic translation initiation factor 5
126	Protein	NP_001960	EIF5	eukaryotic translation initiation factor 5
127	DNA	NM_002890	RASA1	RAS p21 protein activator (GTPase activating protein) 1
128	Protein	NP_002881	RASA1	RAS p21 protein activator (GTPase activating protein) 1
129	DNA	NM_022650	RASA1	RAS p21 protein activator (GTPase activating protein) 1
130	Protein	NP_072179	RASA1	RAS p21 protein activator (GTPase activating protein) 1
131	DNA	NM_001404	EEF1G	eukaryotic translation elongation factor 1 gamma
132	Protein	NP_001395	EEF1G	eukaryotic translation elongation factor 1 gamma
133	DNA	NM_006156	NEDD8	neural precursor cell expressed, developmentally down-regulated 8
134	Protein	NP_006147	NEDD8	neural precursor cell expressed, developmentally down-regulated 8
135	DNA	NM_003010	MAP2K4	mitogen-activated protein kinase kinase 4
136	Protein	NP_003001	MAP2K4	mitogen-activated protein kinase kinase 4
137	DNA	HG884-HT884		Oncogene E6-Ap, Papillomavirus
138	DNA	NM_001789	CDC25A	cell division cycle 25A
139	Protein	NP_001780	CDC25A	cell division cycle 25A
140	DNA	NM_001350	DAXX	death-associated protein 6
141	Protein	NP_001341	DAXX	death-associated protein 6
142	DNA	NM_002719	PPP2R5C	protein phosphatase 2, regulatory subunit B (B56), gamma isoform
143	Protein	NP_002710	PPP2R5C	protein phosphatase 2, regulatory subunit B (B56), gamma isoform
144	DNA	NM_002689	POLA2	polymerase (DNA-directed), alpha (70kD)
145	Protein	NP_002680	POLA2	polymerase (DNA-directed), alpha (70kD)
146	DNA	NM_005056	RBBP2	retinoblastoma binding protein 2
147	Protein	NP_005047	RBBP2	retinoblastoma binding protein 2
148	DNA	NM_001800	CDKN2D	cyclin-dependent kinase inhibitor 2D (p19, inhibits CDK4)

149	Protein	NP_001791	CDKN2D	cyclin-dependent kinase inhibitor 2D (p19, inhibits CDK4)
150	DNA	NM_079421	CDKN2D	cyclin-dependent kinase inhibitor 2D (p19, inhibits CDK4)
151	DNA	NM_000465	BARD1	BRCA1 associated RING domain 1
152	Protein	NP_000456	BARD1	BRCA1 associated RING domain 1
153	DNA	NM_001786	CDC2	cell division cycle 2, G1 to S and G2 to M
154	Protein	NP_001777	CDC2	cell division cycle 2, G1 to S and G2 to M
155	DNA	NM_033379	CDC2	cell division cycle 2, G1 to S and G2 to M
156	Protein	NP_203698	CDC2	cell division cycle 2, G1 to S and G2 to M
157	DNA	NM_003503	CDC7L1	CDC7 cell division cycle 7-like 1 (S. cerevisiae)
158	Protein	NP_003494	CDC7L1	CDC7 cell division cycle 7-like 1 (S. cerevisiae)
159	DNA	NM_006254	PRKCD	protein kinase C, delta
160	Protein	NP_006245	PRKCD	protein kinase C, delta
161	DNA	NM_003242	TGFBR2	transforming growth factor, beta receptor II (70/80kDa)
162	Protein	NP_003233	TGFBR2	transforming growth factor, beta receptor II (70/80kDa)
163	DNA	HG1996-HT2044		Guanine Nucleotide-Binding Protein Rap2, Ras-Oncogene Related
164	DNA	NM_005904	MADH7	MAD, mothers against decapentaplegic homolog 7 (Drosophila)
165	Protein	NP_005895	MADH7	MAD, mothers against decapentaplegic homolog 7 (Drosophila)
166	DNA	NM_005426	TP53BP2	tumor protein p53 binding protein, 2
167	Protein	NP_005417	TP53BP2	tumor protein p53 binding protein, 2
168	DNA	NM_004322	BAD	BCL2-antagonist of cell death
169	Protein	NP_004313	BAD	BCL2-antagonist of cell death
170	DNA	NM_032989	BAD	BCL2-antagonist of cell death
171	DNA	NM_004579	MAP4K2	mitogen-activated protein kinase kinase kinase kinase 2
172	Protein	NP_004570	MAP4K2	mitogen-activated protein kinase kinase kinase kinase 2
173	DNA	HG1103-HT1103		Guanine Nucleotide-Binding Protein Ral, Ras-Oncogene Related
174	DNA	NM_006270	RRAS	related RAS viral (r-ras) oncogene homolog
175	Protein	NP_006261	RRAS	related RAS viral (r-ras) oncogene homolog
176	DNA	NM_002592	PCNA	proliferating cell nuclear antigen

177	Protein	NP_002583	PCNA	proliferating cell nuclear antigen
178	DNA	NM_000038	APC	adenomatosis polyposis coli
179	Protein	NP_000029	APC	adenomatosis polyposis coli
180	DNA	NM_002880	RAF1	v-raf-1 murine leukemia viral oncogene homolog 1
181	Protein	NP_002871	RAF1	v-raf-1 murine leukemia viral oncogene homolog 1
182	DNA	NM_005642	TAF7	TAF7 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 55kDa
183	Protein	NP_005633	TAF7	TAF7 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 55kDa
184	DNA	NM_001761	CCNF	cyclin F
185	Protein	NP_001752	CCNF	cyclin F
186	DNA	NM_004985	KRAS2	v-Ki-ras2 Kirsten rat sarcoma 2 viral oncogene homolog
187	Protein	NP_004976	KRAS2	v-Ki-ras2 Kirsten rat sarcoma 2 viral oncogene homolog
188	DNA	NM_033360	KRAS2	v-Ki-ras2 Kirsten rat sarcoma 2 viral oncogene homolog
189	Protein	NP_203524	KRAS2	v-Ki-ras2 Kirsten rat sarcoma 2 viral oncogene homolog
190	DNA	NM_000075	CDK4	cyclin-dependent kinase 4
191	Protein	NP_000066	CDK4	cyclin-dependent kinase 4
192	DNA	NM_032913	CDK4	cyclin-dependent kinase 4
193	Protein	NP_116302	CDK4	cyclin-dependent kinase 4
194	DNA	NM_052984	CDK4	cyclin-dependent kinase 4
195	Protein	NP_443710	CDK4	cyclin-dependent kinase 4
196	DNA	NM_001237	CCNA2	cyclin A2
197	Protein	NP_001228	CCNA2	cyclin A2
198	DNA	NM_031966	CCNB1	cyclin B1
199	Protein	NP_114172	CCNB1	cyclin B1
200	DNA	NM_005903	MADH5	MAD, mothers against decapentaplegic homolog 5 (Drosophila)
201	Protein	NP_005894	MADH5	MAD, mothers against decapentaplegic homolog 5 (Drosophila)
202	DNA	NM_001799	CDK7	cyclin-dependent kinase 7 (MO15 homolog, Xenopus laevis, cdk-activating kinase)
203	Protein	NP_001790	CDK7	cyclin-dependent kinase 7 (MO15 homolog, Xenopus laevis, cdk-activating kinase)
204	DNA	NM_002512	NME2	non-metastatic cells 2, protein (NM23B) expressed in
205	Protein	NP_002503	NME2	non-metastatic cells 2, protein (NM23B) expressed in
206	DNA	NM_000269	NME1	non-metastatic cells 1, protein (NM23A) expressed in
207	Protein	NP_000260	NME1	non-metastatic cells 1, protein (NM23A) expressed in
208	DNA	NM_006256	PRKCL2	protein kinase C-like 2
209	Protein	NP_006247	PRKCL2	protein kinase C-like 2
210	DNA	NM_000179	MSH6	mutS homolog 6 (E. coli)

211	Protein	NP_000170	MSH6	mutS homolog 6 (E. coli)
212	DNA	NM_004048	B2M	beta-2-microglobulin
213	Protein	NP_004039	B2M	beta-2-microglobulin
214	DNA	NM_006013	RPL10	ribosomal protein L10
215	Protein	NP_006004	RPL10	ribosomal protein L10
216	DNA	NM_004506	HSF2	heat shock transcription factor 2
217	Protein	NP_004497	HSF2	heat shock transcription factor 2
218	DNA	NM_001238	CCNE1	cyclin E1
219	Protein	NP_001229	CCNE1	cyclin E1
220	DNA	NM_057182	CCNE1	cyclin E1
221	Protein	NP_476530	CCNE1	cyclin E1
222	DNA	NM_001641	APEX1	APEX nuclease (multifunctional DNA repair enzyme) 1
223	Protein	NP_001632	APEX1	APEX nuclease (multifunctional DNA repair enzyme) 1
224	DNA	NM_080648	APEX1	APEX nuclease (multifunctional DNA repair enzyme) 1
225	DNA	NM_080649	APEX1	APEX nuclease (multifunctional DNA repair enzyme) 1
226	DNA	NM_001982	ERBB3	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
227	Protein	NP_001973	ERBB3	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
228	DNA	NM_001938	DR1	down-regulator of transcription 1, TBP-binding (negative cofactor 2)
229	Protein	NP_001929	DR1	down-regulator of transcription 1, TBP-binding (negative cofactor 2)
230	DNA	NM_002448	MSX1	msh homeo box homolog 1 (Drosophila)
231	Protein	NP_002439	MSX1	msh homeo box homolog 1 (Drosophila)
232	DNA	NM_000127	EXT1	exostoses (multiple) 1
233	Protein	NP_000118	EXT1	exostoses (multiple) 1
234	DNA	NM_005760	CBF2	CCAAT-box-binding transcription factor
235	Protein	NP_005751	CBF2	CCAAT-box-binding transcription factor
236	DNA	NM_002825	PTN	pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1)
237	Protein	NP_002816	PTN	pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1)
238	DNA	NM_002715	PPP2CA	protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform

239	Protein	NP_002706	PPP2CA	protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform
240	DNA	NM_004555	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
241	Protein	NP_004546	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
242	DNA	NM_173163	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
243	Protein	NP_775186	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
244	DNA	NM_173164	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
245	Protein	NP_775187	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
246	DNA	NM_173165	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
247	Protein	NP_775188	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
248	DNA	NM_002295	LAMR1	laminin receptor 1 (ribosomal protein SA, 67kDa)
249	Protein	NP_002286	LAMR1	laminin receptor 1 (ribosomal protein SA, 67kDa)
250	DNA	NM_001634	AMD1	S-adenosylmethionine decarboxylase 1
251	Protein	NP_001625	AMD1	S-adenosylmethionine decarboxylase 1
252	DNA	NM_021960	MCL1	myeloid cell leukemia sequence 1 (BCL2-related)
253	Protein	NP_068779	MCL1	myeloid cell leukemia sequence 1 (BCL2-related)
254	DNA	HG4322-HT4592		Tubulin, Beta
255	DNA	NM_001022	RPS19	ribosomal protein S19
256	Protein	NP_001013	RPS19	ribosomal protein S19
257	DNA	NM_012185	FOXE2	forkhead box E2
258	Protein	NP_036317	FOXE2	forkhead box E2
259	DNA	M20812		Cluster Incl. M20812:Human kappa-immunoglobulin germline pseudogene (cos118) variable region (subgroup V kappa I) /cds=(6,326) /gb=M20812 /gi=185958 /ug=Hs.150224 /len=351

260	Protein	AAA36095		Cluster Incl. M20812:Human kappa-immunoglobulin germline pseudogene (cos118) variable region (subgroup V kappa I) /cds=(6,326) /gb=M20812 /gi=185958 /ug=Hs.150224 /len=351
261	DNA	AF068744		Cluster Incl. AF068744:Homo sapiens double homeodomain protein (DUX2) mRNA, complete cds /cds=(211,453) /gb=AF068744 /gi=3414864 /ug=Hs.157425 /len=556
262	Protein	AF068744 (Translation)		Cluster Incl. AF068744:Homo sapiens double homeodomain protein (DUX2) mRNA, complete cds /cds=(211,453) /gb=AF068744 /gi=3414864 /ug=Hs.157425 /len=556
263	DNA	NM_012369		Cluster Incl. AC004853:Homo sapiens PAC clone DJ0669B10 from 7q33-q35 /cds=(0,953) /gb=AC004853 /gi=3766130 /ug=Hs.159899 /len=954
264	Protein	NP_036501		Cluster Incl. AC004853:Homo sapiens PAC clone DJ0669B10 from 7q33-q35 /cds=(0,953) /gb=AC004853 /gi=3766130 /ug=Hs.159899 /len=954
265	DNA	W28732		Cluster Incl. W28732:50h7 Homo sapiens cDNA /gb=W28732 /gi=1308680 /ug=Hs.177496 /len=818
266	DNA	NM_005336	HDLBP	high density lipoprotein binding protein (vigilin)
267	Protein	NP_005327	HDLBP	high density lipoprotein binding protein (vigilin)
268	DNA	NM_000973	RPL8	ribosomal protein L8
269	Protein	NP_000964	RPL8	ribosomal protein L8
270	DNA	NM_033301	RPL8	ribosomal protein L8
271	DNA	NM_001013	RPS9	ribosomal protein S9
272	Protein	NP_001004	RPS9	ribosomal protein S9
273	DNA	M90356		Cluster Incl. M90356:Human BTF3 protein homologue gene, complete cds /cds=(0,644) /gb=M90356 /gi=179575 /ug=Hs.181967 /len=645
274	Protein	M90356 (Translation)		Cluster Incl. M90356:Human BTF3 protein homologue gene, complete cds /cds=(0,644) /gb=M90356 /gi=179575 /ug=Hs.181967 /len=645
275	DNA	NM_002952	RPS2	ribosomal protein S2
276	Protein	NP_002943	RPS2	ribosomal protein S2
277	DNA	NM_001002	RPLP0	ribosomal protein, large, P0
278	Protein	NP_000993	RPLP0	ribosomal protein, large, P0
279	DNA	NM_053275	RPLP0	ribosomal protein, large, P0

280	DNA	NM_022551		Homo sapiens ribosomal protein S18 (RPS18), mRNA
281	Protein	NP_072045		Homo sapiens ribosomal protein S18 (RPS18)
282	DNA	NM_021109	TMSB4X	thymosin, beta 4, X chromosome
283	Protein	NP_066932	TMSB4X	thymosin, beta 4, X chromosome
284	DNA	NM_001014	RPS10	ribosomal protein S10
285	Protein	NP_001005	RPS10	ribosomal protein S10
286	DNA	NM_004095	EIF4EBP1	eukaryotic translation initiation factor 4E binding protein 1
287	Protein	NP_004086	EIF4EBP1	eukaryotic translation initiation factor 4E binding protein 1
288	DNA	NM_012231	PRDM2	PR domain containing 2, with ZNF domain
289	Protein	NP_036363	PRDM2	PR domain containing 2, with ZNF domain
290	DNA	NM_015866	PRDM2	PR domain containing 2, with ZNF domain
291	Protein	NP_056950	PRDM2	PR domain containing 2, with ZNF domain
292	DNA	AF047485	LOC90586	amine oxidase pseudogene
293	Protein	AF047485 (Translation)	LOC90586	amine oxidase pseudogene
294	DNA	NM_024407	NDUFS7	NADH dehydrogenase (ubiquinone) Fe-S protein 7, 20kDa (NADH-coenzyme Q reductase)
295	Protein	NP_077718	NDUFS7	NADH dehydrogenase (ubiquinone) Fe-S protein 7, 20kDa (NADH-coenzyme Q reductase)
296	DNA	NM_005271		Unknown (protein for MGC:13241) [Homo sapiens], mRNA sequence
297	Protein	NP_005262		Unknown (protein for MGC:13241) [Homo sapiens], mRNA sequence
298	DNA	NM_012084		Unknown (protein for MGC:13241) [Homo sapiens], mRNA sequence
299	Protein	NP_036216		Unknown (protein for MGC:13241) [Homo sapiens], mRNA sequence
300	DNA	U08997		Unknown (protein for MGC:13241) [Homo sapiens], mRNA sequence
301	DNA	J04755		Cluster Incl. J04755:Human ferritin H processed pseudogene, complete cds /cds=UNKNOWN /gb=J04755 /gi=182512 /ug=Hs.239542 /len=2083
302	DNA	NM_003655	CBX4	chromobox homolog 4 (Pc class homolog, Drosophila)

303	Protein	NP_003646	CBX4	chromobox homolog 4 (Pc class homolog, Drosophila)
304	DNA	NM_014212	HOXC11	homeo box C11
305	Protein	NP_055027	HOXC11	homeo box C11
306	DNA	W28912		ESTs
307	DNA	NM_005160	ADRBK2	adrenergic, beta, receptor kinase 2
308	Protein	NP_005151	ADRBK2	adrenergic, beta, receptor kinase 2
309	DNA	NM_006026	H1FX	H1 histone family, member X
310	Protein	NP_006017	H1FX	H1 histone family, member X
311	DNA	NM_015062	KIAA0595	KIAA0595 protein
312	Protein	NP_055877	KIAA0595	KIAA0595 protein
313	DNA	NM_001498	GCLC	glutamate-cysteine ligase, catalytic subunit
314	Protein	NP_001489	GCLC	glutamate-cysteine ligase, catalytic subunit
315	DNA	AL050390	DKFZP564O0 43	hypothetical protein DKFZp564O043
316	DNA	NM_003797	EED	embryonic ectoderm development
317	Protein	NP_003788	EED	embryonic ectoderm development
318	DNA	NM_152991	EED	embryonic ectoderm development
319	Protein	NP_694536	EED	embryonic ectoderm development
320	DNA	NM_005796	NUTF2	nuclear transport factor 2
321	Protein	NP_005787	NUTF2	nuclear transport factor 2
322	DNA	NM_003876	PMI	putative receptor protein
323	Protein	NP_003867	PMI	putative receptor protein
324	DNA	D80001	KIAA0179	KIAA0179 protein
325	Protein	D80001 (Translation)	KIAA0179	KIAA0179 protein
326	DNA	NM_005792	MPHOSPH6	M-phase phosphoprotein 6
327	Protein	NP_005783	MPHOSPH6	M-phase phosphoprotein 6
328	DNA	NM_006716	ASK	activator of S phase kinase
329	Protein	NP_006707	ASK	activator of S phase kinase
330	DNA	NM_001812	CENPC1	centromere protein C 1
331	Protein	NP_001803	CENPC1	centromere protein C 1
332	DNA	NM_001186	BACH1	BTB and CNC homology 1, basic leucine zipper transcription factor 1
333	Protein	NP_001177	BACH1	BTB and CNC homology 1, basic leucine zipper transcription factor 1
334	DNA	NM_014673	KIAA0103	KIAA0103 gene product
335	Protein	NP_055488	KIAA0103	KIAA0103 gene product
336	DNA	NM_001537	HSBP1	heat shock factor binding protein 1
337	Protein	NP_001528	HSBP1	heat shock factor binding protein 1
338	DNA	NM_001024	RPS21	ribosomal protein S21
339	Protein	NP_001015	RPS21	ribosomal protein S21
340	DNA	NM_001003	RPLP1	ribosomal protein, large, P1
341	Protein	NP_000994	RPLP1	ribosomal protein, large, P1
342	DNA	NM_000998	RPL37A	ribosomal protein L37a

343	Protein	NP_000989	RPL37A	ribosomal protein L37a
344	DNA	AL049430		Homo sapiens mRNA; cDNA DKFZp586H201 (from clone DKFZp586H201), mRNA sequence
345	DNA	NM_030756	TCF7L2	transcription factor 7-like 2 (T-cell specific, HMG-box)
346	Protein	NP_110383	TCF7L2	transcription factor 7-like 2 (T-cell specific, HMG-box)
347	DNA	NM_014247	PDZ-GEF1	PDZ domain containing guanine nucleotide exchange factor(GEF)1
348	Protein	NP_055062	PDZ-GEF1	PDZ domain containing guanine nucleotide exchange factor(GEF)1
349	DNA	NM_000303	PMM2	phosphomannomutase 2
350	Protein	NP_000294	PMM2	phosphomannomutase 2
351	DNA	NM_022719	DGCR14	DiGeorge syndrome critical region gene 14
352	Protein	NP_073210	DGCR14	DiGeorge syndrome critical region gene 14
353	DNA	NM_007042	RPP14	ribonuclease P (14kD)
354	Protein	NP_008973	RPP14	ribonuclease P (14kD)
355	DNA	NM_014671	KIAA0010	ubiquitin-protein isopeptide ligase (E3)
356	Protein	NP_055486	KIAA0010	ubiquitin-protein isopeptide ligase (E3)
357	DNA	NM_004854	HNK-1ST	HNK-1 sulfotransferase
358	Protein	NP_004845	HNK-1ST	HNK-1 sulfotransferase
359	DNA	NM_004330	BNIP2	BCL2/adenovirus E1B 19kDa interacting protein 2
360	Protein	NP_004321	BNIP2	BCL2/adenovirus E1B 19kDa interacting protein 2
361	DNA	AB002293	KIAA0295	KIAA0295 protein
362	Protein	AB002293 (Translation)	KIAA0295	KIAA0295 protein
363	DNA	AB023198	KIAA0981	KIAA0981 protein
364	Protein	AB023198 (Translation)	KIAA0981	KIAA0981 protein
365	DNA	AB007915	KIAA0446	KIAA0446 gene product
366	Protein	AB007915 (Translation)	KIAA0446	KIAA0446 gene product
367	DNA	NM_004273	CHST3	carbohydrate (chondroitin 6) sulfotransferase 3
368	Protein	NP_004264	CHST3	carbohydrate (chondroitin 6) sulfotransferase 3
369	DNA	NM_014363	SACS	spastic ataxia of Charlevoix-Saguenay (sacsin)
370	Protein	NP_055178	SACS	spastic ataxia of Charlevoix-Saguenay (sacsin)
371	DNA	NM_000094	COL7A1	collagen, type VII, alpha 1 (epidermolysis bullosa, dystrophic, dominant and recessive)

372	Protein	NP_000085	COL7A1	collagen, type VII, alpha 1 (epidermolysis bullosa, dystrophic, dominant and recessive)
373	DNA	AA928996	THOC2	THO complex 2
374	DNA	AL079314	ZNF364	zinc finger protein 364
375	Protein	AL079314 (Translation)	ZNF364	zinc finger protein 364
376	DNA	NM_015641	TES	testis derived transcript (3 LIM domains)
377	Protein	NP_056456	TES	testis derived transcript (3 LIM domains)
378	DNA	NM_152829	TES	testis derived transcript (3 LIM domains)
379	Protein	NP_690042	TES	testis derived transcript (3 LIM domains)
380	DNA	NM_002856	PVRL2	poliovirus receptor-related 2 (herpesvirus entry mediator B)
381	Protein	NP_002847	PVRL2	poliovirus receptor-related 2 (herpesvirus entry mediator B)
382	DNA	AI817548		Cluster Incl. AI817548:wk24e08.x1 Homo sapiens cDNA, 3' end /clone=IMAGE-2413286 /clone_end=3' /gb=AI817548 /gi=5436627 /ug=Hs.184093 /len=570
383	DNA	NM_015002	FBXO21	F-box only protein 21
384	Protein	NP_055817	FBXO21	F-box only protein 21
385	DNA	NM_033624	FBXO21	F-box only protein 21
386	Protein	NP_296373	FBXO21	F-box only protein 21
387	DNA	NM_001788	CDC10	CDC10 cell division cycle 10 homolog (S. cerevisiae)
388	Protein	NP_001779	CDC10	CDC10 cell division cycle 10 homolog (S. cerevisiae)
389	DNA	NM_006989	CAPRI	Ca2+-promoted Ras inactivator
390	Protein	NP_008920	CAPRI	Ca2+-promoted Ras inactivator
391	DNA	NM_003704	RES4-22	gene with multiple splice variants near HD locus on 4p16.3
392	Protein	NP_003695	RES4-22	gene with multiple splice variants near HD locus on 4p16.3
393	DNA	NM_007144	ZNF144	zinc finger protein 144 (Mel-18)
394	Protein	NP_009075	ZNF144	zinc finger protein 144 (Mel-18)
395	DNA	AL049450		Homo sapiens mRNA; cDNA DKFZp586B1922 (from clone DKFZp586B1922), mRNA sequence
396	DNA	NM_014686	KIAA0355	KIAA0355 gene product
397	Protein	NP_055501	KIAA0355	KIAA0355 gene product
398	DNA	NM_005837	RPP20	POP7 (processing of precursor, S. cerevisiae) homolog
399	Protein	NP_005828	RPP20	POP7 (processing of precursor, S. cerevisiae) homolog

400	DNA	NM_004786	TXNL	thioredoxin-like, 32kDa
401	Protein	NP_004777	TXNL	thioredoxin-like, 32kDa
402	DNA	NM_030809	C12orf22	chromosome 12 open reading frame 22
403	Protein	NP_110436	C12orf22	chromosome 12 open reading frame 22
404	DNA	NM_012290	TLK1	tousled-like kinase 1
405	Protein	NP_036422	TLK1	tousled-like kinase 1
406	DNA	NM_005047	PSMD5	proteasome (prosome, macropain) 26S subunit, non-ATPase, 5
407	Protein	NP_005038	PSMD5	proteasome (prosome, macropain) 26S subunit, non-ATPase, 5
408	DNA	NM_003218	TERF1	telomeric repeat binding factor (NIMA-interacting) 1
409	Protein	NP_003209	TERF1	telomeric repeat binding factor (NIMA-interacting) 1
410	DNA	NM_017489	TERF1	telomeric repeat binding factor (NIMA-interacting) 1
411	Protein	NP_059523	TERF1	telomeric repeat binding factor (NIMA-interacting) 1
412	DNA	NM_001991	EZH1	enhancer of zeste homolog 1 (Drosophila)
413	Protein	NP_001982	EZH1	enhancer of zeste homolog 1 (Drosophila)
414	DNA	NM_003768	PEA15	phosphoprotein enriched in astrocytes 15
415	Protein	NP_003759	PEA15	phosphoprotein enriched in astrocytes 15
416	DNA	NM_013287	PEA15	phosphoprotein enriched in astrocytes 15
417	DNA	NM_023005	BAZ1B	bromodomain adjacent to zinc finger domain, 1B
418	Protein	NP_075381	BAZ1B	bromodomain adjacent to zinc finger domain, 1B
419	DNA	NM_032408	BAZ1B	bromodomain adjacent to zinc finger domain, 1B
420	Protein	NP_115784	BAZ1B	bromodomain adjacent to zinc finger domain, 1B
421	DNA	NM_015935	CGI-01	CGI-01 protein
422	Protein	NP_057019	CGI-01	CGI-01 protein
423	DNA	AF052148		Homo sapiens clone 24507 mRNA sequence
424	DNA	NM_000994	RPL32	ribosomal protein L32
425	Protein	NP_000985	RPL32	ribosomal protein L32
426	DNA	NM_005395	PMS2L9	postmeiotic segregation increased 2-like 9
427	Protein	NP_005386	PMS2L9	postmeiotic segregation increased 2-like 9
428	DNA	NM_003289	TPM2	tropomyosin 2 (beta)
429	Protein	NP_003280	TPM2	tropomyosin 2 (beta)
430	DNA	NM_001026	RPS24	ribosomal protein S24
431	Protein	NP_001017	RPS24	ribosomal protein S24
432	DNA	NM_033022	RPS24	ribosomal protein S24
433	Protein	NP_148982	RPS24	ribosomal protein S24
434	DNA	NM_001101	ACTB	actin, beta

435	Protein	NP_001092	ACTB	actin, beta
436	DNA	NM_001015	RPS11	ribosomal protein S11
437	Protein	NP_001006	RPS11	ribosomal protein S11
438	DNA	NM_013410	AK3	adenylate kinase 3
439	Protein	NP_037542	AK3	adenylate kinase 3
440	DNA	NM_000034	ALDOA	aldolase A, fructose-bisphosphate
441	Protein	NP_000025	ALDOA	aldolase A, fructose-bisphosphate
442	DNA	NM_000982	RPL21	ribosomal protein L21
443	Protein	NP_000973	RPL21	ribosomal protein L21
444	DNA	NM_004559	NSEP1	nuclease sensitive element binding protein 1
445	Protein	NP_004550	NSEP1	nuclease sensitive element binding protein 1
446	DNA	NM_000984	RPL23A	ribosomal protein L23a
447	Protein	NP_000975	RPL23A	ribosomal protein L23a
448	DNA	NM_000498	CYP11B2	cytochrome P450, subfamily XIB (steroid 11-beta-hydroxylase), polypeptide 2
449	Protein	NP_000489	CYP11B2	cytochrome P450, subfamily XIB (steroid 11-beta-hydroxylase), polypeptide 2
450	DNA	NM_002654	PKM2	pyruvate kinase, muscle
451	Protein	NP_002645	PKM2	pyruvate kinase, muscle
452	DNA	W25892	EST	EST
453	DNA	NM_000990	RPL27A	ribosomal protein L27a
454	Protein	NP_000981	RPL27A	ribosomal protein L27a
455	DNA	NM_001009	RPS5	ribosomal protein S5
456	Protein	NP_001000	RPS5	ribosomal protein S5
457	DNA	NM_001023	RPS20	ribosomal protein S20
458	Protein	NP_001014	RPS20	ribosomal protein S20
459	DNA	NM_001905	CTPS	CTP synthase
460	Protein	NP_001896	CTPS	CTP synthase
461	DNA	NM_021104	RPL41	ribosomal protein L41
462	Protein	NP_066927	RPL41	ribosomal protein L41
463	DNA	NM_002235	KCNA6	potassium voltage-gated channel, shaker-related subfamily, member 6
464	Protein	NP_002226	KCNA6	potassium voltage-gated channel, shaker-related subfamily, member 6
465	DNA	NM_001004	RPLP2	ribosomal protein, large P2
466	Protein	NP_000995	RPLP2	ribosomal protein, large P2
467	DNA	NM_002268	RPLP2	ribosomal protein, large P2
468	Protein	NP_002259	RPLP2	ribosomal protein, large P2
469	DNA	NM_032771	RPLP2	ribosomal protein, large P2
470	Protein	NP_116160	RPLP2	ribosomal protein, large P2
471	DNA	AL096857	KIAA1096	KIAA1096 protein
472	Protein	AL096857 (Translation)	KIAA1096	KIAA1096 protein
473	DNA	AI498132		Homo sapiens cDNA FLJ37094 fis, clone BRACE2018337, mRNA sequence
474	DNA	NM_005382	NEF3	neurofilament 3 (150kDa medium)

475	Protein	NP_005373	NEF3	neurofilament 3 (150kDa medium)
476	DNA	NM_014296	CAPN7	calpain 7
477	Protein	NP_055111	CAPN7	calpain 7
478	DNA	NM_006012	CLPP	ClpP caseinolytic protease, ATP-dependent, proteolytic subunit homolog (E. coli)
479	Protein	NP_006003	CLPP	ClpP caseinolytic protease, ATP-dependent, proteolytic subunit homolog (E. coli)
480	DNA	NM_000138	FBN1	fibrillin 1 (Marfan syndrome)
481	Protein	NP_000129	FBN1	fibrillin 1 (Marfan syndrome)
482	DNA	NM_006710	COP9	COP9 homolog
483	Protein	NP_006701	COP9	COP9 homolog
484	DNA	NM_012425	RSU1	Ras suppressor protein 1
485	Protein	NP_036557	RSU1	Ras suppressor protein 1
486	DNA	NM_012321	LSM4	U6 snRNA-associated Sm-like protein
487	Protein	NP_036453	LSM4	U6 snRNA-associated Sm-like protein
488	DNA	NM_000430	PAFAH1B1	platelet-activating factor acetylhydrolase, isoform Ib, alpha subunit 45kDa
489	Protein	NP_000421	PAFAH1B1	platelet-activating factor acetylhydrolase, isoform Ib, alpha subunit 45kDa
490	DNA	D86971	KIAA0217	KIAA0217 protein
491	Protein	D86971 (Translation)	KIAA0217	KIAA0217 protein
492	DNA	NM_006887	ZFP36L2	zinc finger protein 36, C3H type-like 2
493	Protein	NP_008818	ZFP36L2	zinc finger protein 36, C3H type-like 2
494	DNA	NM_005483	CHAF1A	chromatin assembly factor 1, subunit A (p150)
495	Protein	NP_005474	CHAF1A	chromatin assembly factor 1, subunit A (p150)
496	DNA	AF000560		Homo sapiens, clone IMAGE:4477095, mRNA, mRNA sequence
497	Protein	AAB58413		Homo sapiens, clone IMAGE:4477095, mRNA, mRNA sequence
498	DNA	NM_002567	PBP	prostatic binding protein
499	Protein	NP_002558	PBP	prostatic binding protein
500	DNA	NM_015906	TRIM33	tripartite motif-containing 33
501	Protein	NP_056990	TRIM33	tripartite motif-containing 33
502	DNA	NM_033020	TRIM33	tripartite motif-containing 33
503	Protein,	NP_148980	TRIM33	tripartite motif-containing 33
504	DNA	NM_006696	SMAP	skeletal muscle abundant protein
505	Protein	NP_006687	SMAP	skeletal muscle abundant protein
506	DNA	NM_015636	EIF2B4	eukaryotic translation initiation factor 2B, subunit 4 delta, 67kDa

507	Protein	NP_056451	EIF2B4	eukaryotic translation initiation factor 2B, subunit 4 delta, 67kDa
508	DNA	NM_006195	PBX3	pre-B-cell leukemia transcription factor 3
509	Protein	NP_006186	PBX3	pre-B-cell leukemia transcription factor 3
510	DNA	NM_003325	HIRA	HIR histone cell cycle regulation defective homolog A (S. cerevisiae)
511	Protein	NP_003316	HIRA	HIR histone cell cycle regulation defective homolog A (S. cerevisiae)
512	DNA	NM_001324	CSTF1	cleavage stimulation factor, 3' pre-RNA, subunit 1, 50kDa
513	Protein	NP_001315	CSTF1	cleavage stimulation factor, 3' pre-RNA, subunit 1, 50kDa
514	DNA	NM_006246	PPP2R5E	protein phosphatase 2, regulatory subunit B (B56), epsilon isoform
515	Protein	NP_006237	PPP2R5E	protein phosphatase 2, regulatory subunit B (B56), epsilon isoform
516	DNA	AB023148	KIAA0931	KIAA0931 protein
517	Protein	AB023148 (Translation)	KIAA0931	KIAA0931 protein
518	DNA	NM_003610	RAE1	RAE1 RNA export 1 homolog (S. pombe)
519	Protein	NP_003601	RAE1	RAE1 RNA export 1 homolog (S. pombe)
520	DNA	NM_001469	G22P1	thyroid autoantigen 70kDa (Ku antigen)
521	Protein	NP_001460	G22P1	thyroid autoantigen 70kDa (Ku antigen)
522	DNA	NM_003035	SIL	TAL1 (SCL) interrupting locus
523	Protein	NP_003026	SIL	TAL1 (SCL) interrupting locus
524	DNA	NM_030794	FLJ21007	hypothetical protein FLJ21007
525	Protein	NP_110421	FLJ21007	hypothetical protein FLJ21007
526	DNA	NM_006267	RANBP2	RAN binding protein 2
527	Protein	NP_006258	RANBP2	RAN binding protein 2
528	DNA	L19183	MAC30	hypothetical protein MAC30
529	Protein	L19183 (Translation)	MAC30	hypothetical protein MAC30
530	DNA	AF004292	DKFZP566C134	DKFZP566C134 protein
531	DNA	AL118582		OVN6-2 [Homo sapiens], mRNA sequence
532	DNA	NM_003021	SGT	small glutamine-rich tetratricopeptide repeat (TPR)-containing
533	Protein	NP_003012	SGT	small glutamine-rich tetratricopeptide repeat (TPR)-containing
534	DNA	NM_005882	MAEA	macrophage erythroblast attacher
535	Protein	NP_005873	MAEA	macrophage erythroblast attacher

536	DNA	NM_006411	AGPAT1	1-acylglycerol-3-phosphate O-acyltransferase 1 (lysophosphatidic acid acyltransferase, alpha)
537	Protein	NP_006402	AGPAT1	1-acylglycerol-3-phosphate O-acyltransferase 1 (lysophosphatidic acid acyltransferase, alpha)
538	DNA	NM_032741	AGPAT1	1-acylglycerol-3-phosphate O-acyltransferase 1 (lysophosphatidic acid acyltransferase, alpha)
539	DNA	NM_014820	TOMM70A	translocase of outer mitochondrial membrane 70 homolog A (yeast)
540	Protein	NP_055635	TOMM70A	translocase of outer mitochondrial membrane 70 homolog A (yeast)
541	DNA	NM_012300	FBXW1B	F-box and WD-40 domain protein 1B
542	Protein	NP_036432	FBXW1B	F-box and WD-40 domain protein 1B
543	DNA	NM_033644	FBXW1B	F-box and WD-40 domain protein 1B
544	Protein	NP_387448	FBXW1B	F-box and WD-40 domain protein 1B
545	DNA	NM_033645	FBXW1B	F-box and WD-40 domain protein 1B
546	Protein	NP_387449	FBXW1B	F-box and WD-40 domain protein 1B
547	DNA	NM_016936	UBN1	ubinuclein 1
548	Protein	NP_058632	UBN1	ubinuclein 1
549	DNA	NM_006950	SYN1	synapsin I
550	Protein	NP_008881	SYN1	synapsin I
551	DNA	NM_133499	SYN1	synapsin I
552	Protein	NP_598006	SYN1	synapsin I
553	DNA	NM_153208	MGC35048	hypothetical protein MGC35048
554..	Protein	NP_694940	MGC35048	hypothetical protein MGC35048
555	DNA	NM_014282	HABP4	hyaluronan binding protein 4
556	Protein	NP_055097	HABP4	hyaluronan binding protein 4
557	DNA	AF035314		Homo sapiens clone 23651 mRNA sequence
558	DNA	NM_003637	ITGA10	integrin, alpha 10
559	Protein	NP_003628	ITGA10	integrin, alpha 10
560	DNA	NM_001016	RPS12	ribosomal protein S12
561	Protein	NP_001007	RPS12	ribosomal protein S12
562	DNA	L10379	HRIHFB2206	HRIHFB2206 protein
563	DNA	NM_003107	SOX4	SRY (sex determining region Y)-box 4
564	Protein	NP_003098	SOX4	SRY (sex determining region Y)-box 4
565	DNA	NM_003056	SLC19A1	solute carrier family 19 (folate transporter), member 1
566	Protein	NP_003047	SLC19A1	solute carrier family 19 (folate transporter), member 1

567	DNA	NM_006831	HEAB	ATP/GTP-binding protein
568	Protein	NP_006822	HEAB	ATP/GTP-binding protein
569	DNA	NM_020368	SAS10	disrupter of silencing 10
570	Protein	NP_065101	SAS10	disrupter of silencing 10
571	DNA	NM_002061	GCLM	glutamate-cysteine ligase, modifier subunit
572	Protein	NP_002052	GCLM	glutamate-cysteine ligase, modifier subunit
573	DNA	NM_018121	C10ORF6	hypothetical protein FLJ10512
574	Protein	NP_060591	C10ORF6	hypothetical protein FLJ10512
575	DNA	NM_144592	C10ORF6	hypothetical protein FLJ10512
576	Protein	NP_653193	C10ORF6	hypothetical protein FLJ10512
577	DNA	NM_006165	NFRKB	nuclear factor related to kappa B binding protein
578	Protein	NP_006156	NFRKB	nuclear factor related to kappa B binding protein
579	DNA	NM_004587	RRBP1	ribosome binding protein 1 homolog 180kDa (dog)
580	Protein	NP_004578	RRBP1	ribosome binding protein 1 homolog 180kDa (dog)
581	DNA	AA887480	KIAA0117	KIAA0117 protein
582	DNA	NM_014788	TRIM14	tripartite motif-containing 14
583	Protein	NP_055603	TRIM14	tripartite motif-containing 14
584	DNA	NM_033219	TRIM14	tripartite motif-containing 14
585	DNA	NM_033220	TRIM14	tripartite motif-containing 14
586	DNA	NM_033221	TRIM14	tripartite motif-containing 14
587	Protein	NP_150090	TRIM14	tripartite motif-containing 14
588	DNA	NM_003705	SLC25A12	solute carrier family 25 (mitochondrial carrier, Aralar), member 12
589	Protein	NP_003696	SLC25A12	solute carrier family 25 (mitochondrial carrier, Aralar), member 12
590	DNA	NM_021983	HLA-DRB4	major histocompatibility complex, class II, DR beta 4
591	Protein	NP_068818	HLA-DRB4	major histocompatibility complex, class II, DR beta 4
592	DNA	NM_015004	KIAA0116	KIAA0116 protein
593	Protein	NP_055819	KIAA0116	KIAA0116 protein
594	DNA	NM_015703	CGI-96	CGI-96 protein
595	Protein	NP_056518	CGI-96	CGI-96 protein
596	DNA	NM_000181	GUSB	glucuronidase, beta
597	Protein	NP_000172	GUSB	glucuronidase, beta
598	DNA	NM_014509		Homo sapiens kraken-like (dJ222E13.1), mRNA
599	Protein	NP_055324		Homo sapiens kraken-like (dJ222E13.1)
600	DNA	NM_004290	RNF14	ring finger protein 14
601	Protein	NP_004281	RNF14	ring finger protein 14
602	DNA	NM_002254	KIF3C	kinesin family member 3C
603	Protein	NP_002245	KIF3C	kinesin family member 3C
604	DNA	NM_003205	TCF12	transcription factor 12 (HTF4, helix-loop-helix transcription factors 4)

605	Protein	NP_003196	TCF12	transcription factor 12 (HTF4, helix-loop-helix transcription factors 4)
606	DNA	NM_005875	GC20	translation factor sui1 homolog
607	Protein	NP_005866	GC20	translation factor sui1 homolog
608	DNA	NM_022739	SMURF2	E3 ubiquitin ligase SMURF2
609	Protein	NP_073576	SMURF2	E3 ubiquitin ligase SMURF2
610	DNA	NM_012308	FBXL11	F-box and leucine-rich repeat protein 11
611	Protein	NP_036440	FBXL11	F-box and leucine-rich repeat protein 11
612	DNA	NM_014952	KIAA0945	KIAA0945 protein
613	Protein	NP_055767	KIAA0945	KIAA0945 protein
614	DNA	NM_004793	PRSS15	protease, serine, 15
615	Protein	NP_004784	PRSS15	protease, serine, 15
616	DNA	NM_015384	IDN3	IDN3 protein
617	Protein	NP_056199	IDN3	IDN3 protein
618	DNA	NM_133433	IDN3	IDN3 protein
619	Protein	NP_597677	IDN3	IDN3 protein
620	DNA	NM_006999	POLS	polymerase (DNA directed) sigma
621	Protein	NP_008930	POLS	polymerase (DNA directed) sigma
622	DNA	NM_005318		Cluster Incl. Z97630:Human DNA sequence from clone 466N1 on chromosome 22q12-13 Contains H1F0(H1 histone family, member 0) gene, 2-amino-3-ketobutyrate -CoA ligase(nuclear gene encoding mitochondrial protein), GALR3 (galanin receptor) gene, ESTs, GSSs an
623	Protein	NP_005309		Cluster Incl. Z97630:Human DNA sequence from clone 466N1 on chromosome 22q12-13 Contains H1F0(H1 histone family, member 0) gene, 2-amino-3-ketobutyrate -CoA ligase(nuclear gene encoding mitochondrial protein), GALR3 (galanin receptor) gene, ESTs, GSSs an
624	DNA	NM_000852	GSTP1	glutathione S-transferase pi
625	Protein	NP_000843	GSTP1	glutathione S-transferase pi
626	DNA	NM_015607	DKFZP547E1010	DKFZP547E1010 protein
627	Protein	NP_056422	DKFZP547E1010	DKFZP547E1010 protein
628	DNA	AL096752		Homo sapiens mRNA; cDNA DKFZp434A012 (from clone DKFZp434A012), mRNA sequence
629	DNA	NM_000983	RPL22	ribosomal protein L22
630	Protein	NP_000974	RPL22	ribosomal protein L22
631	DNA	NM_005269	GLI	glioma-associated oncogene homolog (zinc finger protein)

632	Protein	NP_005260	GLI	glioma-associated oncogene homolog (zinc finger protein)
633	DNA	NM_000968	RPL4	ribosomal protein L4
634	Protein	NP_000959	RPL4	ribosomal protein L4
635	DNA	NM_000838	GRM1	glutamate receptor, metabotropic 1
636	Protein	NP_000829	GRM1	glutamate receptor, metabotropic 1
637	DNA	NM_000704	ATP4A	ATPase, H+/K+ exchanging, alpha polypeptide
638	Protein	NP_000695	ATP4A	ATPase, H+/K+ exchanging, alpha polypeptide
639	DNA	NM_006213	PHKG1	phosphorylase kinase, gamma 1 (muscle)
640	Protein	NP_006204	PHKG1	phosphorylase kinase, gamma 1 (muscle)
641	DNA	NM_001060	TBXA2R	thromboxane A2 receptor
642	Protein	NP_001051	TBXA2R	thromboxane A2 receptor
643	DNA	NM_000980	RPL18A	ribosomal protein L18a
644	Protein	NP_000971	RPL18A	ribosomal protein L18a
645	DNA	NM_000405	GM2A	GM2 ganglioside activator protein
646	Protein	NP_000396	GM2A	GM2 ganglioside activator protein
647	DNA	NM_000997	RPL37	ribosomal protein L37
648	Protein	NP_000988	RPL37	ribosomal protein L37
649	DNA	NM_003431	ZNF124	zinc finger protein 124 (HZF-16)
650	Protein	NP_003422	ZNF124	zinc finger protein 124 (HZF-16)
651	DNA	NM_005507	CFL1	cofilin 1 (non-muscle)
652	Protein	NP_005498	CFL1	cofilin 1 (non-muscle)
653	DNA	NM_021130	PPIA	peptidylprolyl isomerase A (cyclophilin A)
654	Protein	NP_066953	PPIA	peptidylprolyl isomerase A (cyclophilin A)
655	DNA	NM_000976	RPL12	ribosomal protein L12
656	Protein	NP_000967	RPL12	ribosomal protein L12
657	DNA	NM_000992	RPL29	ribosomal protein L29
658	Protein	NP_000983	RPL29	ribosomal protein L29
659	DNA	NM_000993	RPL31	ribosomal protein L31
660	Protein	NP_000984	RPL31	ribosomal protein L31
661	DNA	D50525		Cluster Incl. D50525:Human mRNA for TI-227H /cds=UNKNOWN /gb=D50525 /gi=1167502 /ug=Hs.184914 /len=3911
662	DNA	NM_001355	DDT	D-dopachrome tautomerase
663	Protein	NP_001346	DDT	D-dopachrome tautomerase
664	DNA	NM_005834	TIMM17B	translocase of inner mitochondrial membrane 17 homolog B (yeast)
665	Protein	NP_005825	TIMM17B	translocase of inner mitochondrial membrane 17 homolog B (yeast)
666	DNA	NM_007294	BRCA1	breast cancer 1, early onset
667	Protein	NP_009225	BRCA1	breast cancer 1, early onset

668	DNA	NM_007295	BRCA1	breast cancer 1, early onset
669	DNA	NM_007296	BRCA1	breast cancer 1, early onset
670	DNA	NM_007297	BRCA1	breast cancer 1, early onset
671	Protein	NP_009228	BRCA1	breast cancer 1, early onset
672	DNA	NM_007298	BRCA1	breast cancer 1, early onset
673	Protein	NP_009229	BRCA1	breast cancer 1, early onset
674	DNA	NM_004805	POLR2D	polymerase (RNA) II (DNA directed) polypeptide D
675	Protein	NP_004796	POLR2D	polymerase (RNA) II (DNA directed) polypeptide D
676	DNA	NM_015487	GEMIN4	gem (nuclear organelle) associated protein 4
677	Protein	NP_056302	GEMIN4	gem (nuclear organelle) associated protein 4
678	DNA	NM_015721	GEMIN4	gem (nuclear organelle) associated protein 4
679	DNA	AJ006835	RNU17D	RNA, U17D small nucleolar
680	DNA	NM_031246	PSG2	pregnancy specific beta-1-glycoprotein 2
681	Protein	NP_112536	PSG2	pregnancy specific beta-1-glycoprotein 2
682	DNA	NM_004565	PEX14	peroxisomal biogenesis factor 14
683	Protein	NP_004556	PEX14	peroxisomal biogenesis factor 14
684	DNA	NM_001228	CASP8	caspase 8, apoptosis-related cysteine protease
685	Protein	NP_001219	CASP8	caspase 8, apoptosis-related cysteine protease
686	DNA	NM_033355	CASP8	caspase 8, apoptosis-related cysteine protease
687	Protein	NP_203519	CASP8	caspase 8, apoptosis-related cysteine protease
688	DNA	NM_033356	CASP8	caspase 8, apoptosis-related cysteine protease
689	Protein	NP_203520	CASP8	caspase 8, apoptosis-related cysteine protease
690	DNA	NM_033357	CASP8	caspase 8, apoptosis-related cysteine protease
691	Protein	NP_203521	CASP8	caspase 8, apoptosis-related cysteine protease
692	DNA	NM_033358	CASP8	caspase 8, apoptosis-related cysteine protease
693	Protein	NP_203522	CASP8	caspase 8, apoptosis-related cysteine protease
694	DNA	NM_001061	TBXAS1	thromboxane A synthase 1 (platelet, cytochrome P450, subfamily V)
695	Protein	NP_001052	TBXAS1	thromboxane A synthase 1 (platelet, cytochrome P450, subfamily V)
696	DNA	NM_030984	TBXAS1	thromboxane A synthase 1 (platelet, cytochrome P450, subfamily V)
697	Protein	NP_112246	TBXAS1	thromboxane A synthase 1 (platelet, cytochrome P450, subfamily V)

698	DNA	NM_004901	LYSAL1	lysosomal apyrase-like 1
699	Protein	NP_004892	LYSAL1	lysosomal apyrase-like 1
700	DNA	X98494	MPHOSPH10	M-phase phosphoprotein 10 (U3 small nucleolar ribonucleoprotein)
701	Protein	X98494 (Translation)	MPHOSPH10	M-phase phosphoprotein 10 (U3 small nucleolar ribonucleoprotein)
702	DNA	NM_017575	C17orf31	chromosome 17 open reading frame 31
703	Protein	NP_060045	C17orf31	chromosome 17 open reading frame 31
704	DNA	NM_001116	ADCY9	adenylate cyclase 9
705	Protein	NP_001107	ADCY9	adenylate cyclase 9
706	DNA	NM_014810	CAP350	centrosome-associated protein 350
707	Protein	NP_055625	CAP350	centrosome-associated protein 350
708	DNA	NM_005884	PAK4	p21(CDKN1A)-activated kinase 4
709	Protein	NP_005875	PAK4	p21(CDKN1A)-activated kinase 4
710	DNA	NM_000373	UMPS	uridine monophosphate synthetase (orotate phosphoribosyl transferase and orotidine-5'-decarboxylase)
711	Protein	NP_000364	UMPS	uridine monophosphate synthetase (orotate phosphoribosyl transferase and orotidine-5'-decarboxylase)
712	DNA	NM_002273	KRT8	keratin 8
713	Protein	NP_002264	KRT8	keratin 8
714	DNA	NM_006985	NPIP	nuclear pore complex interacting protein
715	Protein	NP_008916	NPIP	nuclear pore complex interacting protein
716	DNA	NM_004064	CDKN1B	cyclin-dependent kinase inhibitor 1B (p27, Kip1)
717	Protein	NP_004055	CDKN1B	cyclin-dependent kinase inhibitor 1B (p27, Kip1)
718	DNA	NM_020765	RBAF600	retinoblastoma-associated factor 600
719	Protein	NP_065816	RBAF600	retinoblastoma-associated factor 600
720	DNA	AI123426		EST
721	DNA	NM_005997	TCFL1	transcription factor-like 1
722	Protein	NP_005988	TCFL1	transcription factor-like 1
723	DNA	NM_005866	SR-BP1	type I sigma receptor
724	Protein	NP_005857	SR-BP1	type I sigma receptor
725	DNA	NM_147157	SR-BP1	type I sigma receptor
726	Protein	NP_671513	SR-BP1	type I sigma receptor
727	DNA	NM_147158	SR-BP1	type I sigma receptor
728	Protein	NP_671514	SR-BP1	type I sigma receptor
729	DNA	NM_147159	SR-BP1	type I sigma receptor
730	Protein	NP_671515	SR-BP1	type I sigma receptor
731	DNA	NM_147160	SR-BP1	type I sigma receptor
732	Protein	NP_671516	SR-BP1	type I sigma receptor

733	DNA	NM_004457	FACL3	fatty-acid-Coenzyme A ligase, long-chain 3
734	Protein	NP_004448	FACL3	fatty-acid-Coenzyme A ligase, long-chain 3
735	DNA	NM_005137	DGCR2	DiGeorge syndrome critical region gene 2
736	Protein	NP_005128	DGCR2	DiGeorge syndrome critical region gene 2
737	DNA	NM_014812	KIAA0470	KIAA0470 gene product
738	Protein	NP_055627	KIAA0470	KIAA0470 gene product
739	DNA	NM_001348	DAPK3	death-associated protein kinase 3
740	Protein	NP_001339	DAPK3	death-associated protein kinase 3
741	DNA	NM_003927	MBD2	methyl-CpG binding domain protein 2
742	Protein	NP_003918	MBD2	methyl-CpG binding domain protein 2
743	DNA	NM_015832	MBD2	methyl-CpG binding domain protein 2
744	Protein	NP_056647	MBD2	methyl-CpG binding domain protein 2
745	DNA	NM_004638	BAT2	HLA-B associated transcript 2
746	Protein	NP_004629	BAT2	HLA-B associated transcript 2
747	DNA	NM_080686	BAT2	HLA-B associated transcript 2
748	Protein	NP_542417	BAT2	HLA-B associated transcript 2
749	DNA	NM_002032	FTH1	ferritin, heavy polypeptide 1
750	Protein	NP_002023	FTH1	ferritin, heavy polypeptide 1
751	DNA	NM_000477	ALB	albumin
752	Protein	NP_000468	ALB	albumin
753	DNA	NM_021019	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
754	Protein	NP_066299	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
755	DNA	NM_079423	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
756	Protein	NP_524147	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
757	DNA	NM_079424	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
758	Protein	NP_524148	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
759	DNA	NM_079425	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
760	Protein	NP_524149	MYL6	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle

761	DNA	AL049449		Homo sapiens mRNA; cDNA DKFZp586B1722 (from clone DKFZp586B1722), mRNA sequence
762	DNA	NM_002381	MATN3	matrilin 3
763	Protein	NP_002372	MATN3	matrilin 3
764	DNA	NM_000365	TPI1	triosephosphate isomerase 1
765	Protein	NP_000356	TPI1	triosephosphate isomerase 1
766	DNA	NM_004996	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
767	Protein	NP_004987	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
768	DNA	NM_019862	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
769	Protein	NP_063915	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
770	DNA	NM_019898	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
771	Protein	NP_063953	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
772	DNA	NM_019899	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
773	Protein	NP_063954	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
774	DNA	NM_000490	AVP	arginine vasopressin (neurophysin II, antidiuretic hormone, diabetes insipidus, neurohypophyseal)
775	Protein	NP_000481	AVP	arginine vasopressin (neurophysin II, antidiuretic hormone, diabetes insipidus, neurohypophyseal)
776	DNA	NM_000999	RPL38	ribosomal protein L38
777	Protein	NP_000990	RPL38	ribosomal protein L38
778	DNA	NM_002297	LCN1	lipocalin 1 (protein migrating faster than albumin, tear prealbumin)
779	Protein	NP_002288	LCN1	lipocalin 1 (protein migrating faster than albumin, tear prealbumin)
780	DNA	NM_006068	TLR6	toll-like receptor 6
781	Protein	NP_006059	TLR6	toll-like receptor 6
782	DNA	NM_012302	LPHH1	latrophilin 1
783	Protein	NP_036434	LPHH1	latrophilin 1
784	DNA	NM_005453	ZNF297	zinc finger protein 297
785	Protein	NP_005444	ZNF297	zinc finger protein 297
786	DNA	AB020676	KIAA0869	KIAA0869 protein
787	Protein	AB020676 (Translation)	KIAA0869	KIAA0869 protein

788	DNA	D83781	NUP160	nucleoporin 160kDa
789	Protein	D83781 (Translation)	NUP160	nucleoporin 160kDa
790	DNA	NM_015229	KIAA0664	KIAA0664 protein
791	Protein	NP_056044	KIAA0664	KIAA0664 protein
792	DNA	NM_005873	RGS19	regulator of G-protein signalling 19
793	Protein	NP_005864	RGS19	regulator of G-protein signalling 19
794	DNA	NM_015608	DKFZp586F1019	DKFZp586F1019 protein
795	Protein	NP_056423	DKFZp586F1019	DKFZp586F1019 protein
796	DNA	NM_014892	KIAA1116	KIAA1116 protein
797	Protein	NP_055707	KIAA1116	KIAA1116 protein
798	DNA	NM_025176	KIAA0980	KIAA0980 protein
799	Protein	NP_079452	KIAA0980	KIAA0980 protein
800	DNA	NM_001217	CA11	carbonic anhydrase XI
801	Protein	NP_001208	CA11	carbonic anhydrase XI
802	DNA	NM_014323	ZNF278	zinc finger protein 278
803	Protein	NP_055138	ZNF278	zinc finger protein 278
804	DNA	NM_032050	ZNF278	zinc finger protein 278
805	Protein	NP_114439	ZNF278	zinc finger protein 278
806	DNA	NM_032051	ZNF278	zinc finger protein 278
807	Protein	NP_114440	ZNF278	zinc finger protein 278
808	DNA	NM_032052	ZNF278	zinc finger protein 278
809	Protein	NP_114441	ZNF278	zinc finger protein 278
810	DNA	NM_006196	PCBP1	poly(rC) binding protein 1
811	Protein	NP_006187	PCBP1	poly(rC) binding protein 1
812	DNA	NM_021038	MBNL	muscleblind-like (Drosophila)
813	Protein	NP_066368	MBNL	muscleblind-like (Drosophila)
814	DNA	NM_000485	APRT	adenine phosphoribosyltransferase
815	Protein	NP_000476	APRT	adenine phosphoribosyltransferase
816	DNA	AI040324		ESTs, Weakly similar to A56429 I-kappa-B-related protein - human [H.sapiens]
817	DNA	NM_006796	AFG3L2	AFG3 ATPase family gene 3-like 2 (yeast)
818	Protein	NP_006787	AFG3L2	AFG3 ATPase family gene 3-like 2 (yeast)
819	DNA	NM_014876	KIAA0063	KIAA0063 gene product
820	Protein	NP_055691	KIAA0063	KIAA0063 gene product
821	DNA	NM_007358	M96	likely ortholog of mouse metal response element binding transcription factor 2
822	Protein	NP_031384	M96	likely ortholog of mouse metal response element binding transcription factor 2
823	DNA	NM_002956	RSN	restin (Reed-Steinberg cell-expressed intermediate filament-associated protein)
824	Protein	NP_002947	RSN	restin (Reed-Steinberg cell-expressed intermediate filament-associated protein)

825	DNA	NM_000281	PCBD	6-pyruvoyl-tetrahydropterin synthase/dimerization cofactor of hepatocyte nuclear factor 1 alpha (TCF1)
826	Protein	NP_000272	PCBD	6-pyruvoyl-tetrahydropterin synthase/dimerization cofactor of hepatocyte nuclear factor 1 alpha (TCF1)
827	DNA	NM_015200	KIAA0648	KIAA0648 protein
828	Protein	NP_056015	KIAA0648	KIAA0648 protein
829	DNA	NM_004992	MECP2	methyl CpG binding protein 2 (Rett syndrome)
830	Protein	NP_004983	MECP2	methyl CpG binding protein 2 (Rett syndrome)
831	DNA	NM_021134	MRPL23	mitochondrial ribosomal protein L23
832	Protein	NP_066957	MRPL23	mitochondrial ribosomal protein L23
833	DNA	NM_005134	PPP4R1	protein phosphatase 4, regulatory subunit 1
834	Protein	NP_005125	PPP4R1	protein phosphatase 4, regulatory subunit 1
835	DNA	NM_001122	ADFP	adipose differentiation-related protein
836	Protein	NP_001113	ADFP	adipose differentiation-related protein
837	DNA	NM_003368	USP1	ubiquitin specific protease 1
838	Protein	NP_003359	USP1	ubiquitin specific protease 1
839	DNA	NM_003925	MBD4	methyl-CpG binding domain protein 4
840	Protein	NP_003916	MBD4	methyl-CpG binding domain protein 4
841	DNA	NM_015339	ADNP	activity-dependent neuroprotector
842	Protein	NP_056154	ADNP	activity-dependent neuroprotector
843	DNA	NM_015338	KIAA0978	KIAA0978 protein
844	Protein	NP_056153	KIAA0978	KIAA0978 protein
845	DNA	NM_006107	OA48-18	acid-inducible phosphoprotein
846	Protein	NP_006098	OA48-18	acid-inducible phosphoprotein
847	DNA	NM_014402	QP-C	low molecular mass ubiquinone-binding protein (9.5kD)
848	Protein	NP_055217	QP-C	low molecular mass ubiquinone-binding protein (9.5kD)
849	DNA	NM_005928	MFGE8	milk fat globule-EGF factor 8 protein
850	Protein	NP_005919	MFGE8	milk fat globule-EGF factor 8 protein
851	DNA	NM_003356	UCP3	uncoupling protein 3 (mitochondrial, proton carrier)
852	Protein	NP_003347	UCP3	uncoupling protein 3 (mitochondrial, proton carrier)
853	DNA	NM_022803	UCP3	uncoupling protein 3 (mitochondrial, proton carrier)

854	Protein	NP_073714	UCP3	uncoupling protein 3 (mitochondrial, proton carrier)
855	DNA	R61362		Unknown protein [Homo sapiens], mRNA sequence
856	DNA	NM_003176	SYCP1	synaptonemal complex protein 1
857	Protein	NP_003167	SYCP1	synaptonemal complex protein 1
858	DNA	NM_005680	TAF1B	TATA box binding protein (TBP)-associated factor, RNA polymerase I, B, 63kDa
859	Protein	NP_005671	TAF1B	TATA box binding protein (TBP)-associated factor, RNA polymerase I, B, 63kDa
860	DNA	NM_030928	CDT1	DNA replication factor
861	Protein	NP_112190	CDT1	DNA replication factor
862	DNA	AF052108		Homo sapiens clone 23687 mRNA sequence
863	DNA	NM_021012	KCNJ12	potassium inwardly-rectifying channel, subfamily J, member 12
864	Protein	NP_066292	KCNJ12	potassium inwardly-rectifying channel, subfamily J, member 12
865	DNA	NM_014875	KIF14	kinesin family member 14
866	Protein	NP_055690	KIF14	kinesin family member 14
867	DNA	NM_002954	RPS27A	ribosomal protein S27a
868	Protein	NP_002945	RPS27A	ribosomal protein S27a
869	DNA	NM_001021	RPS17	ribosomal protein S17
870	Protein	NP_001012	RPS17	ribosomal protein S17
871	DNA	NM_004983	KCNJ9	potassium inwardly-rectifying channel, subfamily J, member 9
872	Protein	NP_004974	KCNJ9	potassium inwardly-rectifying channel, subfamily J, member 9
873	DNA	NM_001926	DEFA6	defensin, alpha 6, Paneth cell-specific
874	Protein	NP_001917	DEFA6	defensin, alpha 6, Paneth cell-specific
875	DNA	NM_001005	RPS3	ribosomal protein S3
876	Protein	NP_000996	RPS3	ribosomal protein S3
877	DNA	NM_001011	RPS7	ribosomal protein S7
878	Protein	NP_001002	RPS7	ribosomal protein S7
879	DNA	NM_004396	DDX5	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 5 (RNA helicase, 68kDa)
880	Protein	NP_004387	DDX5	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 5 (RNA helicase, 68kDa)
881	DNA	NM_145809	LOC220594	TL132 protein
882	Protein	NP_665808	LOC220594	TL132 protein
883	DNA	NM_005718	ARPC4	actin related protein 2/3 complex, subunit 4, 20kDa
884	Protein	NP_005709	ARPC4	actin related protein 2/3 complex, subunit 4, 20kDa
885	DNA	NM_002336	LRP6	low density lipoprotein receptor-related protein 6

886	Protein	NP_002327	LRP6	low density lipoprotein receptor-related protein 6
887	DNA	NM_012120	CD2AP	CD2-associated protein
888	Protein	NP_036252	CD2AP	CD2-associated protein
889	DNA	AB011090	MGA	MAX gene associated
890	Protein	AB011090 (Translation)	MGA	MAX gene associated
891	DNA	NM_000875	IGF1R	insulin-like growth factor 1 receptor
892	Protein	NP_000866	IGF1R	insulin-like growth factor 1 receptor
893	DNA	U44385		Cluster Incl. U44385:Human tissue inhibitor of metalloproteinases-2 (TIMP-2) gene /cds=(302,958) /gb=U44385 /gi=1517892 /ug=Hs.239409 /len=1069
894	Protein	U44385 (Translation)		Cluster Incl. U44385:Human tissue inhibitor of metalloproteinases-2 (TIMP-2) gene /cds=(302,958) /gb=U44385 /gi=1517892 /ug=Hs.239409 /len=1069
895	DNA	NM_004491	GRLF1	glucocorticoid receptor DNA binding factor 1
896	Protein	NP_004482	GRLF1	glucocorticoid receptor DNA binding factor 1
897	DNA	NM_024342	GRLF1	glucocorticoid receptor DNA binding factor 1
898	Protein	NP_077318	GRLF1	glucocorticoid receptor DNA binding factor 1
899	DNA	NM_017737	FLJ20275	hypothetical protein FLJ20275
900	Protein	NP_060207	FLJ20275	hypothetical protein FLJ20275
901	DNA	NM_005484	ADPRTL2	ADP-ribosyltransferase (NAD+; poly(ADP-ribose) polymerase)-like 2
902	Protein	NP_005475	ADPRTL2	ADP-ribosyltransferase (NAD+; poly(ADP-ribose) polymerase)-like 2
903	DNA	NM_005445	CSPG6	chondroitin sulfate proteoglycan 6 (bamacan)
904	Protein	NP_005436	CSPG6	chondroitin sulfate proteoglycan 6 (bamacan)
905	DNA	NM_012121	CDC42EP4	CDC42 effector protein (Rho GTPase binding) 4
906	Protein	NP_036253	CDC42EP4	CDC42 effector protein (Rho GTPase binding) 4
907	DNA	AB028948	KIAA1025	KIAA1025 protein
908	Protein	AB028948 (Translation)	KIAA1025	KIAA1025 protein
909	DNA	NM_018433	TSGA	zinc finger protein
910	Protein	NP_060903	TSGA	zinc finger protein
911	DNA	D14678	KNSL2	kinesin-like 2
912	Protein	D14678 (Translation)	KNSL2	kinesin-like 2
913	DNA	AF022789	USP12	ubiquitin specific protease 12
914	Protein	AF022789 (Translation)	USP12	ubiquitin specific protease 12

915	DNA	NM_018155	FLJ10618	hypothetical protein FLJ10618
916	Protein	NP_060625	FLJ10618	hypothetical protein FLJ10618
917	DNA	AB023216		KIAA0999 protein [Homo sapiens], mRNA sequence
918	Protein	AB023216 (Translation)		KIAA0999 protein [Homo sapiens], mRNA sequence
919	DNA	NM_004454	ETV5	ets variant gene 5 (ets-related molecule)
920	Protein	NP_004445	ETV5	ets variant gene 5 (ets-related molecule)
921	DNA	NM_016614	TTRAP	TRAF and TNF receptor-associated protein
922	Protein	NP_057698	TTRAP	TRAF and TNF receptor-associated protein
923	DNA	AB002374	KIAA0376	KIAA0376 protein
924	Protein	AB002374 (Translation)	KIAA0376	KIAA0376 protein
925	DNA	NM_014889	PITRM1	pitrilysin metalloproteinase 1
926	Protein	NP_055704	PITRM1	pitrilysin metalloproteinase 1
927	DNA	NM_014968	PITRM1	pitrilysin metalloproteinase 1
928	Protein	NP_055783	PITRM1	pitrilysin metalloproteinase 1
929	DNA	NM_014643	KIAA0222	KIAA0222 gene product
930	Protein	NP_055458	KIAA0222	KIAA0222 gene product
931	DNA	NM_003158	STK6	serine/threonine kinase 6
932	Protein	NP_003149	STK6	serine/threonine kinase 6
933	DNA	NM_003600	STK6	serine/threonine kinase 6
934	Protein	NP_003591	STK6	serine/threonine kinase 6
935	DNA	NM_006392	NOL5A	nucleolar protein 5A (56kDa with KKE/D repeat)
936	Protein	NP_006383	NOL5A	nucleolar protein 5A (56kDa with KKE/D repeat)
937	DNA	NM_021074	NDUFV2	NADH dehydrogenase (ubiquinone) flavoprotein 2, 24kDa
938	Protein	NP_066552	NDUFV2	NADH dehydrogenase (ubiquinone) flavoprotein 2, 24kDa
939	DNA	U51704	KIAA1971	similar to junction-mediating and regulatory protein p300 JMY
940	DNA	AI655458	OPLAH	5-oxoprolinase (ATP-hydrolysing)
941	DNA	NM_002136	HNRPA1	heterogeneous nuclear ribonucleoprotein A1
942	Protein	NP_002127	HNRPA1	heterogeneous nuclear ribonucleoprotein A1
943	DNA	NM_031157	HNRPA1	heterogeneous nuclear ribonucleoprotein A1
944	Protein	NP_112420	HNRPA1	heterogeneous nuclear ribonucleoprotein A1
945	DNA	NM_000337	SGCD	sarcoglycan, delta (35kDa dystrophin-associated glycoprotein)
946	Protein	NP_000328	SGCD	sarcoglycan, delta (35kDa dystrophin-associated glycoprotein)

947	DNA	NM_172244	SGCD	sarcoglycan, delta (35kDa dystrophin-associated glycoprotein)
948	Protein	NP_758447	SGCD	sarcoglycan, delta (35kDa dystrophin-associated glycoprotein)
949	DNA	NM_004876	ZNF254	zinc finger protein 254
950	Protein	NP_004867	ZNF254	zinc finger protein 254
951	DNA	D87466	KIAA0276	KIAA0276 protein
952	Protein	D87466 (Translation)	KIAA0276	KIAA0276 protein
953	DNA	NM_000828	GRIA3	glutamate receptor, ionotrophic, AMPA 3
954	Protein	NP_000819	GRIA3	glutamate receptor, ionotrophic, AMPA 3
955	DNA	NM_007325	GRIA3	glutamate receptor, ionotrophic, AMPA 3
956	Protein	NP_015564	GRIA3	glutamate receptor, ionotrophic, AMPA 3
957	DNA	NM_001207	BTF3	basic transcription factor 3
958	Protein	NP_001198	BTF3	basic transcription factor 3
959	DNA	NM_152260	C18B11	C18B11 homolog (44.9kD)
960	Protein	NP_689473	C18B11	C18B11 homolog (44.9kD)
961	DNA	NM_000146	FTL	ferritin, light polypeptide
962	Protein	NP_000137	FTL	ferritin, light polypeptide
963	DNA	W27417	HSMPP8	M-phase phosphoprotein, mpp8
964	DNA	NM_012423	RPL13A	ribosomal protein L13a
965	Protein	NP_036555	RPL13A	ribosomal protein L13a
966	DNA	NM_005858	AKAP8	A kinase (PRKA) anchor protein 8
967	Protein	NP_005849	AKAP8	A kinase (PRKA) anchor protein 8
968	DNA	R59697		Homo sapiens mRNA fragment, mRNA sequence
969	DNA	NM_002485	NBS1	Nijmegen breakage syndrome 1 (nibrin)
970	Protein	NP_002476	NBS1	Nijmegen breakage syndrome 1 (nibrin)
971	DNA	NM_003893	LDB1	LIM domain binding 1
972	Protein	NP_003884	LDB1	LIM domain binding 1
973	DNA	NM_014947	KIAA1041	KIAA1041 protein
974	Protein	NP_055762	KIAA1041	KIAA1041 protein
975	DNA	NM_006052	DSCR3	Down syndrome critical region gene 3
976	Protein	NP_006043	DSCR3	Down syndrome critical region gene 3
977	DNA	NM_138350	LOC90326	Homo sapiens hypothetical protein MGC33488
978	Protein	NP_612359	LOC90326	Homo sapiens hypothetical protein MGC33488
979	DNA	NM_012330	MORF	monocytic leukemia zinc finger protein-related factor
980	Protein	NP_036462	MORF	monocytic leukemia zinc finger protein-related factor
981	DNA	NM_007218	TRC8	patched related protein translocated in renal cancer
982	Protein	NP_009149	TRC8	patched related protein translocated in renal cancer

983	DNA	NM_003135	SRP19	signal recognition particle 19kDa
984	Protein	NP_003126	SRP19	signal recognition particle 19kDa
985	DNA	AA535884	PCTK3	PCTAIRE protein kinase 3
986	DNA	NM_004860	FXR2	fragile X mental retardation, autosomal homolog 2
987	Protein	NP_004851	FXR2	fragile X mental retardation, autosomal homolog 2
988	DNA	NM_006698	BLCAP	bladder cancer associated protein
989	Protein	NP_006689	BLCAP	bladder cancer associated protein
990	DNA	NM_022826	AXOT	axotrophin
991	Protein	NP_073737	AXOT	axotrophin
992	DNA	NM_004597	SNRPD2	small nuclear ribonucleoprotein D2 polypeptide 16.5kDa
993	Protein	NP_004588	SNRPD2	small nuclear ribonucleoprotein D2 polypeptide 16.5kDa
994	DNA	NM_001032		Cluster Incl. AI541542:libtest16.A02.r Homo sapiens cDNA, 5' end /clone_end=5' /gb=AI541542 /gi=4458915 /ug=Hs.539 /len=639
995	Protein	NP_001023		Cluster Incl. AI541542:libtest16.A02.r Homo sapiens cDNA, 5' end /clone_end=5' /gb=AI541542 /gi=4458915 /ug=Hs.539 /len=639
996	DNA	NM_004356	CD81	CD81 antigen (target of antiproliferative antibody 1)
997	Protein	NP_004347	CD81	CD81 antigen (target of antiproliferative antibody 1)
998	DNA	NM_152758	FLJ31657	hypothetical protein FLJ31657
999	Protein	NP_689971	FLJ31657	hypothetical protein FLJ31657
1000	DNA	NM_012399	PITPNB	phosphotidylinositol transfer protein, beta
1001	Protein	NP_036531	PITPNB	phosphotidylinositol transfer protein, beta
1002	DNA	AL049941		Homo sapiens mRNA; cDNA DKFZp564E2222 (from clone DKFZp564E2222), mRNA sequence
1003	DNA	NM_006362	NXF1	nuclear RNA export factor 1
1004	Protein	NP_006353	NXF1	nuclear RNA export factor 1
1005	DNA	NM_001358	DDX15	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 15
1006	Protein	NP_001349	DDX15	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 15
1007	DNA	NM_006570	RAGA	Ras-related GTP-binding protein
1008	Protein	NP_006561	RAGA	Ras-related GTP-binding protein
1009	DNA	NM_006565	CTCF	CCCTC-binding factor (zinc finger protein)

1010	Protein	NP_006556	CTCF	CCCTC-binding factor (zinc finger protein)
1011	DNA	NM_006852	TLK2	tousled-like kinase 2
1012	Protein	NP_006843	TLK2	tousled-like kinase 2
1013	DNA	NM_012289	KEAP1	Kelch-like ECH-associated protein 1
1014	Protein	NP_036421	KEAP1	Kelch-like ECH-associated protein 1
1015	DNA	NM_016322	RAB14	RAB14, member RAS oncogene family
1016	Protein	NP_057406	RAB14	RAB14, member RAS oncogene family
1017	DNA	NM_003756	EIF3S3	eukaryotic translation initiation factor 3, subunit 3 gamma, 40kDa
1018	Protein	NP_003747	EIF3S3	eukaryotic translation initiation factor 3, subunit 3 gamma, 40kDa
1019	DNA	NM_002569	FURIN	furin (paired basic amino acid cleaving enzyme)
1020	Protein	NP_002560	FURIN	furin (paired basic amino acid cleaving enzyme)
1021	DNA	NM_014862	ARNT2	aryl-hydrocarbon receptor nuclear translocator 2
1022	Protein	NP_055677	ARNT2	aryl-hydrocarbon receptor nuclear translocator 2
1023	DNA	NM_014966	DDX30	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 30
1024	Protein	NP_055781	DDX30	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 30
1025	DNA	NM_138614	DDX30	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 30
1026	Protein	NP_619519	DDX30	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 30
1027	DNA	NM_138615	DDX30	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 30
1028	Protein	NP_619520	DDX30	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 30
1029	DNA	NM_152301	MGC9651	hypothetical protein MGC9651
1030	Protein	NP_689514	MGC9651	hypothetical protein MGC9651
1031	DNA	NM_015317	PUM2	pumilio homolog 2 (Drosophila)
1032	Protein	NP_056132	PUM2	pumilio homolog 2 (Drosophila)
1033	DNA	NM_003457	ZNF207	zinc finger protein 207
1034	Protein	NP_003448	ZNF207	zinc finger protein 207
1035	DNA	M61906	PIK3R1	phosphoinositide-3-kinase, regulatory subunit, polypeptide 1 (p85 alpha)
1036	DNA	NM_015649	DKFZP434M154	DKFZP434M154 protein
1037	Protein	NP_056464	DKFZP434M154	DKFZP434M154 protein
1038	DNA	NM_004194	ADAM22	a disintegrin and metalloproteinase domain 22
1039	Protein	NP_004185	ADAM22	a disintegrin and metalloproteinase domain 22

1040	DNA	NM_016351	ADAM22	a disintegrin and metalloproteinase domain 22
1041	Protein	NP_057435	ADAM22	a disintegrin and metalloproteinase domain 22
1042	DNA	NM_021721	ADAM22	a disintegrin and metalloproteinase domain 22
1043	Protein	NP_068367	ADAM22	a disintegrin and metalloproteinase domain 22
1044	DNA	NM_005466	MED6	mediator of RNA polymerase II transcription, subunit 6 homolog (yeast)
1045	Protein	NP_005457	MED6	mediator of RNA polymerase II transcription, subunit 6 homolog (yeast)
1046	DNA	NM_004486	GOLGA2	golgi autoantigen, golgin subfamily a, 2
1047	Protein	NP_004477	GOLGA2	golgi autoantigen, golgin subfamily a, 2
1048	DNA	NM_021047	ZNF253	zinc finger protein 253
1049	Protein	NP_066385	ZNF253	zinc finger protein 253
1050	DNA	NM_017523	HSXIAPAF1	XIAP associated factor-1
1051	Protein	NP_059993	HSXIAPAF1	XIAP associated factor-1
1052	DNA	NM_014010	ASTN2	astrotactin 2
1053	Protein	NP_054729	ASTN2	astrotactin 2
1054	DNA	NM_006114	TOMM40	translocase of outer mitochondrial membrane 40 homolog (yeast)
1055	Protein	NP_006105	TOMM40	translocase of outer mitochondrial membrane 40 homolog (yeast)
1056	DNA	NM_006556	PMVK	phosphomevalonate kinase
1057	Protein	NP_006547	PMVK	phosphomevalonate kinase
1058	DNA	NM_020831	MKL1	megakaryoblastic leukemia (translocation) 1
1059	Protein	NP_065882	MKL1	megakaryoblastic leukemia (translocation) 1
1060	DNA	NM_003172	SURF1	surfeit 1
1061	Protein	NP_003163	SURF1	surfeit 1
1062	DNA	NM_005922	MAP3K4	mitogen-activated protein kinase kinase kinase 4
1063	Protein	NP_005913	MAP3K4	mitogen-activated protein kinase kinase kinase 4
1064	DNA	NM_006724	MAP3K4	mitogen-activated protein kinase kinase kinase 4
1065	Protein	NP_006715	MAP3K4	mitogen-activated protein kinase kinase kinase 4
1066	DNA	NM_015446	ELYS	ELYS transcription factor-like protein TMBS62
1067	Protein	NP_056261	ELYS	ELYS transcription factor-like protein TMBS62
1068	DNA	NM_002589	PCDH7	BH-protocadherin (brain-heart)
1069	Protein	NP_002580	PCDH7	BH-protocadherin (brain-heart)
1070	DNA	NM_032456	PCDH7	BH-protocadherin (brain-heart)
1071	Protein	NP_115832	PCDH7	BH-protocadherin (brain-heart)
1072	DNA	NM_032457	PCDH7	BH-protocadherin (brain-heart)
1073	Protein	NP_115833	PCDH7	BH-protocadherin (brain-heart)
1074	DNA	NM_020119	ZAP	zinc finger antiviral protein

1075	Protein	NP_064504	ZAP	zinc finger antiviral protein
1076	DNA	NM_024625	ZAP	zinc finger antiviral protein
1077	Protein	NP_078901	ZAP	zinc finger antiviral protein
1078	DNA	NM_001211	BUB1B	BUB1 budding uninhibited by benzimidazoles 1 homolog beta (yeast)
1079	Protein	NP_001202	BUB1B	BUB1 budding uninhibited by benzimidazoles 1 homolog beta (yeast)
1080	DNA	NM_014042	DKFZP564M082	DKFZP564M082 protein
1081	Protein	NP_054761	DKFZP564M082	DKFZP564M082 protein
1082	DNA	AB011178	SCOP	SCN Circadian Oscillatory Protein (SCOP)
1083	Protein	AB011178 (Translation)	SCOP	SCN Circadian Oscillatory Protein (SCOP)
1084	DNA	NM_015542	RENT2	regulator of nonsense transcripts 2
1085	Protein	NP_056357	RENT2	regulator of nonsense transcripts 2
1086	DNA	NM_080599	RENT2	regulator of nonsense transcripts 2
1087	DNA	NM_005722	ACTR2	ARP2 actin-related protein 2 homolog (yeast)
1088	Protein	NP_005713	ACTR2	ARP2 actin-related protein 2 homolog (yeast)
1089	DNA	NM_021090	MTMR3	myotubularin related protein 3
1090	Protein	NP_066576	MTMR3	myotubularin related protein 3
1091	DNA	NM_153050	MTMR3	myotubularin related protein 3
1092	Protein	NP_694690	MTMR3	myotubularin related protein 3
1093	DNA	NM_153051	MTMR3	myotubularin related protein 3
1094	Protein	NP_694691	MTMR3	myotubularin related protein 3
1095	DNA	NM_003559	PIP5K2B	phosphatidylinositol-4-phosphate 5-kinase, type II, beta
1096	Protein	NP_003550	PIP5K2B	phosphatidylinositol-4-phosphate 5-kinase, type II, beta
1097	DNA	NM_138687	PIP5K2B	phosphatidylinositol-4-phosphate 5-kinase, type II, beta
1098	Protein	NP_619632	PIP5K2B	phosphatidylinositol-4-phosphate 5-kinase, type II, beta
1099	DNA	NM_006356	ATP5H	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit d
1100	Protein	NP_006347	ATP5H	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit d
1101	DNA	NM_015176	KIAA0483	KIAA0483 protein
1102	Protein	NP_055991	KIAA0483	KIAA0483 protein
1103	DNA	NM_003611	OFD1	oral-facial-digital syndrome 1
1104	Protein	NP_003602	OFD1	oral-facial-digital syndrome 1
1105	DNA	NM_002938	RNF4	ring finger protein 4
1106	Protein	NP_002929	RNF4	ring finger protein 4

1107	DNA	NM_015310	EFA6R	ADP-ribosylation factor guanine nucleotide factor 6
1108	Protein	NP_056125	EFA6R	ADP-ribosylation factor guanine nucleotide factor 6
1109	DNA	NM_015530	GORASP2	golgi reassembly stacking protein 2, 55kDa
1110	Protein	NP_056345	GORASP2	golgi reassembly stacking protein 2, 55kDa
1111	DNA	NM_006275	Homo sapiens splicing factor, arginine/serine -rich 6 (SFRS6), mRNA	Homo sapiens mRNA; cDNA DKFZp564J223 (from clone DKFZp564J223), mRNA sequence
1112	Protein	NP_006266	Homo sapiens splicing factor, arginine/serine -rich 6 (SFRS6)	Homo sapiens mRNA; cDNA DKFZp564J223 (from clone DKFZp564J223), mRNA sequence
1113	DNA	NM_012470	TRN-SR	transportin-SR
1114	Protein	NP_036602	TRN-SR	transportin-SR
1115	DNA	NM_006360	GA17	dendritic cell protein
1116	Protein	NP_006351	GA17	dendritic cell protein
1117	DNA	NM_014159	HIF1	huntingtin interacting protein 1
1118	Protein	NP_054878	HIF1	huntingtin interacting protein 1
1119	DNA	NM_000100	CSTB	cystatin B (stefin B)
1120	Protein	NP_000091	CSTB	cystatin B (stefin B)
1121	DNA	NM_018947	CYCS	cytochrome c, somatic
1122	Protein	NP_061820	CYCS	cytochrome c, somatic
1123	DNA	NM_001312	CRIP2	cysteine-rich protein 2
1124	Protein	NP_001303	CRIP2	cysteine-rich protein 2
1125	DNA	AB002368	RANBP20	RAN binding protein 20
1126	Protein	AB002368 (Translation)	RANBP20	RAN binding protein 20
1127	DNA	NM_021188	APA1	likely ortholog of mouse another partner for ARF 1
1128	Protein	NP_067011	APA1	likely ortholog of mouse another partner for ARF 1
1129	DNA	NM_003129	SQLE	squalene epoxidase
1130	Protein	NP_003120	SQLE	squalene epoxidase
1131	DNA	NM_020357	PCNP	PEST-containing nuclear protein
1132	Protein	NP_065090	PCNP	PEST-containing nuclear protein
1133	DNA	NM_006323	SEC24B	SEC24 related gene family, member B (S. cerevisiae)
1134	Protein	NP_006314	SEC24B	SEC24 related gene family, member B (S. cerevisiae)
1135	DNA	AB028980	USP24	ubiquitin specific protease 24
1136	Protein	AB028980 (Translation)	USP24	ubiquitin specific protease 24
1137	DNA	AL049432	RAI17	retinoic acid induced 17
1138	DNA	NM_015167	PTDSR	phosphatidylserine receptor
1139	Protein	NP_055982	PTDSR	phosphatidylserine receptor
1140	DNA	NM_000753	PDE3B	phosphodiesterase 3B, cGMP-inhibited

1141	Protein	NP_000744	PDE3B	phosphodiesterase 3B, cGMP-inhibited
1142	DNA	NM_000922	PDE3B	phosphodiesterase 3B, cGMP-inhibited
1143	Protein	NP_000913	PDE3B	phosphodiesterase 3B, cGMP-inhibited
1144	DNA	NM_005224	DRIL1	dead ringer-like 1 (Drosophila)
1145	Protein	NP_005215	DRIL1	dead ringer-like 1 (Drosophila)
1146	DNA	NM_002155	HSPA6	heat shock 70kDa protein 6 (HSP70B')
1147	Protein	NP_002146	HSPA6	heat shock 70kDa protein 6 (HSP70B')
1148	DNA	NM_012242	DKK1	dickkopf homolog 1 (Xenopus laevis)
1149	Protein	NP_036374	DKK1	dickkopf homolog 1 (Xenopus laevis)
1150	DNA	NM_004715	CTDP1	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase, subunit 1
1151	Protein	NP_004706	CTDP1	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase, subunit 1
1152	DNA	NM_048368	CTDP1	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase, subunit 1
1153	Protein	NP_430255	CTDP1	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase, subunit 1
1154	DNA	NM_001952	E2F6	E2F transcription factor 6
1155	Protein	NP_001943	E2F6	E2F transcription factor 6
1156	DNA	NM_014939	KIAA1012	KIAA1012 protein
1157	Protein	NP_055754	KIAA1012	KIAA1012 protein
1158	DNA	NM_006250	PRH1	proline-rich protein HaeIII subfamily 1
1159	Protein	NP_006241	PRH1	proline-rich protein HaeIII subfamily 1
1160	DNA	NM_021974	POLR2F	polymerase (RNA) II (DNA directed) polypeptide F
1161	Protein	NP_068809	POLR2F	polymerase (RNA) II (DNA directed) polypeptide F
1162	DNA	NM_001584	C11orf8	chromosome 11 open reading frame 8
1163	Protein	NP_001575	C11orf8	chromosome 11 open reading frame 8
1164	DNA	NM_015438	DKFZP586I2223	intermediate filament-like MGC:2625
1165	Protein	NP_056253	DKFZP586I2223	intermediate filament-like MGC:2625
1166	DNA	NM_080730	DKFZP586I2223	intermediate filament-like MGC:2625
1167	Protein	NP_542768	DKFZP586I2223	intermediate filament-like MGC:2625

1168	DNA	NM_080731	DKFZP586I22 23	intermediate filament-like MGC:2625
1169	Protein	NP_542769	DKFZP586I22 23	intermediate filament-like MGC:2625
1170	DNA	NM_003801	GPAA1	GPAA1P anchor attachment protein 1 homolog (yeast)
1171	Protein	NP_003792	GPAA1	GPAA1P anchor attachment protein 1 homolog (yeast)
1172	DNA	NM_000347	SPTB	spectrin, beta, erythrocytic (includes spherocytosis, clinical type I)
1173	Protein	NP_000338	SPTB	spectrin, beta, erythrocytic (includes spherocytosis, clinical type I)
1174	DNA	NM_003686	EXO1	exonuclease 1
1175	Protein	NP_003677	EXO1	exonuclease 1
1176	DNA	NM_006027	EXO1	exonuclease 1
1177	Protein	NP_006018	EXO1	exonuclease 1
1178	DNA	NM_130398	EXO1	exonuclease 1
1179	Protein	NP_569082	EXO1	exonuclease 1
1180	DNA	NM_014345	ZFP318	endocrine regulator
1181	Protein	NP_055160	ZFP318	endocrine regulator
1182	DNA	NM_001262	CDKN2C	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
1183	Protein	NP_001253	CDKN2C	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
1184	DNA	NM_078626	CDKN2C	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
1185	DNA	AB020699	KIAA0892	KIAA0892 protein
1186	Protein	AB020699 (Translation)	KIAA0892	KIAA0892 protein
1187	DNA	AB007925	FNBP2	formin binding protein 2
1188	Protein	AB007925 (Translation)	FNBP2	formin binding protein 2
1189	DNA	NM_004898	CLOCK	clock homolog (mouse)
1190	Protein	NP_004889	CLOCK	clock homolog (mouse)
1191	DNA	NM_003720	DSCR2	Down syndrome critical region gene 2
1192	Protein	NP_003711	DSCR2	Down syndrome critical region gene 2
1193	DNA	NM_006924	SFRS1	splicing factor, arginine/serine-rich 1 (splicing factor 2, alternate splicing factor)
1194	Protein	NP_008855	SFRS1	splicing factor, arginine/serine-rich 1 (splicing factor 2, alternate splicing factor)
1195	DNA	NM_004326	BCL9	B-cell CLL/lymphoma 9
1196	Protein	NP_004317	BCL9	B-cell CLL/lymphoma 9
1197	DNA	NM_003283	TNNT1	troponin T1, skeletal, slow
1198	Protein	NP_003274	TNNT1	troponin T1, skeletal, slow
1199	DNA	NM_021126	MPST	mercaptopyruvate sulfurtransferase
1200	Protein	NP_066949	MPST	mercaptopyruvate sulfurtransferase

1201	DNA	NM_001182	ALDH7A1	aldehyde dehydrogenase 7 family, member A1
1202	Protein	NP_001173	ALDH7A1	aldehyde dehydrogenase 7 family, member A1
1203	DNA	NM_001749	CAPNS1	calpain, small subunit 1
1204	Protein	NP_001740	CAPNS1	calpain, small subunit 1
1205	DNA	NM_004346	CASP3	caspase 3, apoptosis-related cysteine protease
1206	Protein	NP_004337	CASP3	caspase 3, apoptosis-related cysteine protease
1207	DNA	NM_032991	CASP3	caspase 3, apoptosis-related cysteine protease
1208	DNA	NM_003145	SSR2	signal sequence receptor, beta (translocon-associated protein beta)
1209	Protein	NP_003136	SSR2	signal sequence receptor, beta (translocon-associated protein beta)
1210	DNA	NM_153273	IHPK1	inositol hexaphosphate kinase 1
1211	Protein	NP_695005	IHPK1	inositol hexaphosphate kinase 1
1212	DNA	NM_001728	BSG	basigin (OK blood group)
1213	Protein	NP_001719	BSG	basigin (OK blood group)
1214	DNA	NM_004374	COX6C	cytochrome c oxidase subunit VIc
1215	Protein	NP_004365	COX6C	cytochrome c oxidase subunit VIc
1216	DNA	NM_004047	ATP6V0B	ATPase, H+ transporting, lysosomal 21kDa, V0 subunit c"
1217	Protein	NP_004038	ATP6V0B	ATPase, H+ transporting, lysosomal 21kDa, V0 subunit c"
1218	DNA	NM_004541	NDUFA1	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 1, 7.5kDa
1219	Protein	NP_004532	NDUFA1	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 1, 7.5kDa
1220	DNA	NM_014297	YF13H12	protein expressed in thyroid
1221	Protein	NP_055112	YF13H12	protein expressed in thyroid
1222	DNA	NM_004759	MAPKAPK2	mitogen-activated protein kinase-activated protein kinase 2
1223	Protein	NP_004750	MAPKAPK2	mitogen-activated protein kinase-activated protein kinase 2
1224	DNA	NM_032960	MAPKAPK2	mitogen-activated protein kinase-activated protein kinase 2
1225	Protein	NP_116584	MAPKAPK2	mitogen-activated protein kinase-activated protein kinase 2
1226	DNA	NM_000289	PFKM	phosphofructokinase, muscle
1227	Protein	NP_000280	PFKM	phosphofructokinase, muscle
1228	DNA	NM_005104	BRD2	bromodomain containing 2
1229	Protein	NP_005095	BRD2	bromodomain containing 2
1230	DNA	NM_004235	KLF4	Kruppel-like factor 4 (gut)

1231	Protein	NP_004226	KLF4	Kruppel-like factor 4 (gut)
1232	DNA	NM_007271	STK38	serine/threonine kinase 38
1233	Protein	NP_009202	STK38	serine/threonine kinase 38
1234	DNA	NM_138448	ACYP2	acylphosphatase 2, muscle type
1235	Protein	NP_612457	ACYP2	acylphosphatase 2, muscle type
1236	DNA	NM_003045	SLC7A1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1
1237	Protein	NP_003036	SLC7A1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1
1238	DNA	NM_002446	MAP3K10	mitogen-activated protein kinase kinase kinase 10
1239	Protein	NP_002437	MAP3K10	mitogen-activated protein kinase kinase kinase 10
1240	DNA	NM_003429	ZNF85	zinc finger protein 85 (HPF4, HTF1)
1241	Protein	NP_003420	ZNF85	zinc finger protein 85 (HPF4, HTF1)
1242	DNA	NM_005547	IVL	involucrin
1243	Protein	NP_005538	IVL	involucrin
1244	DNA	NM_000661	RPL9	ribosomal protein L9
1245	Protein	NP_000652	RPL9	ribosomal protein L9
1246	DNA	W28729	EST	EST
1247	DNA	NM_052855	MGC15396	hypothetical protein MGC15396
1248	Protein	NP_443087	MGC15396	hypothetical protein MGC15396
1249	DNA	NM_004160	PYY	peptide YY
1250	Protein	NP_004151	PYY	peptide YY
1251	DNA	NM_004875	RPA40	RNA polymerase I subunit
1252	Protein	NP_004866	RPA40	RNA polymerase I subunit
1253	DNA	NM_014291	GCAT	glycine C-acetyltransferase (2-amino-3-ketobutyrate coenzyme A ligase)
1254	Protein	NP_055106	GCAT	glycine C-acetyltransferase (2-amino-3-ketobutyrate coenzyme A ligase)
1255	DNA	NM_007344	TTF1	transcription termination factor, RNA polymerase I
1256	Protein	NP_031370	TTF1	transcription termination factor, RNA polymerase I
1257	DNA	NM_005632	SOLH	small optic lobes homolog (Drosophila)
1258	Protein	NP_005623	SOLH	small optic lobes homolog (Drosophila)
1259	DNA	AB011542	EGFL5	EGF-like-domain, multiple 5
1260	Protein	AB011542 (Translation)	EGFL5	EGF-like-domain, multiple 5
1261	DNA	NM_021003	PPM1A	protein phosphatase 1A (formerly 2C), magnesium-dependent, alpha isoform
1262	Protein	NP_066283	PPM1A	protein phosphatase 1A (formerly 2C), magnesium-dependent, alpha isoform
1263	DNA	D30612	ZNF282	zinc finger protein 282
1264	Protein	D30612 (Translation)	ZNF282	zinc finger protein 282

1265	DNA	NM_005476	GNE	UDP-N-acetylglucosamine-2-epimerase/N-acetylmannosamine kinase
1266	Protein	NP_005467	GNE	UDP-N-acetylglucosamine-2-epimerase/N-acetylmannosamine kinase
1267	DNA	NM_005926	MFAP1	microfibrillar-associated protein 1
1268	Protein	NP_005917	MFAP1	microfibrillar-associated protein 1
1269	DNA	NM_006359	SLC9A6	solute carrier family 9 (sodium/hydrogen exchanger), isoform 6
1270	Protein	NP_006350	SLC9A6	solute carrier family 9 (sodium/hydrogen exchanger), isoform 6
1271	DNA	NM_003087	SNCG	synuclein, gamma (breast cancer-specific protein 1)
1272	Protein	NP_003078	SNCG	synuclein, gamma (breast cancer-specific protein 1)
1273	DNA	NM_153341	FLJ90005	hypothetical protein FLJ90005
1274	Protein	NP_699172	FLJ90005	hypothetical protein FLJ90005
1275	DNA	NM_006978	ZNF183	zinc finger protein 183 (RING finger, C3HC4 type)
1276	Protein	NP_008909	ZNF183	zinc finger protein 183 (RING finger, C3HC4 type)
1277	DNA	NM_004135	IDH3G	isocitrate dehydrogenase 3 (NAD+) gamma
1278	Protein	NP_004126	IDH3G	isocitrate dehydrogenase 3 (NAD+) gamma
1279	DNA	NM_174869	IDH3G	isocitrate dehydrogenase 3 (NAD+) gamma
1280	Protein	NP_777358	IDH3G	isocitrate dehydrogenase 3 (NAD+) gamma
1281	DNA	NM_001166	BIRC2	baculoviral IAP repeat-containing 2
1282	Protein	NP_001157	BIRC2	baculoviral IAP repeat-containing 2
1283	DNA	NM_004788	UBE4A	ubiquitination factor E4A (UFD2 homolog, yeast)
1284	Protein	NP_004779	UBE4A	ubiquitination factor E4A (UFD2 homolog, yeast)
1285	DNA	D87470	KIAA0280	KIAA0280 protein
1286	Protein	D87470 (Translation)	KIAA0280	KIAA0280 protein
1287	DNA	NM_006010	ARMET	arginine-rich, mutated in early stage tumors
1288	Protein	NP_006001	ARMET	arginine-rich, mutated in early stage tumors
1289	DNA	NM_002165	ID1	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
1290	Protein	NP_002156	ID1	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
1291	DNA	NM_000454	SOD1	superoxide dismutase 1, soluble (amyotrophic lateral sclerosis 1 (adult))

1292	Protein	NP_000445	SOD1	superoxide dismutase 1, soluble (amyotrophic lateral sclerosis 1 (adult))
1293	DNA	NM_007202	AKAP10	A kinase (PRKA) anchor protein 10
1294	Protein	NP_009133	AKAP10	A kinase (PRKA) anchor protein 10
1295	DNA	J00287		Cluster Incl. J00287:Human pepsinogen gene /cds=(55,1221) /gb=J00287 /gi=189798 /ug=Hs.75558 /len=1381
1296	Protein	J00287 (Translation)		Cluster Incl. J00287:Human pepsinogen gene /cds=(55,1221) /gb=J00287 /gi=189798 /ug=Hs.75558 /len=1381
1297	DNA	NM_004357	CD151	CD151 antigen
1298	Protein	NP_004348	CD151	CD151 antigen
1299	DNA	NM_139030	CD151	CD151 antigen
1300	Protein	NP_620599	CD151	CD151 antigen
1301	DNA	NM_139031	CD151	CD151 antigen
1302	DNA	NM_004270	CRSP9	cofactor required for Sp1 transcriptional activation, subunit 9, 33kDa
1303	Protein	NP_004261	CRSP9	cofactor required for Sp1 transcriptional activation, subunit 9, 33kDa
1304	DNA	NM_000375	UROS	uroporphyrinogen III synthase (congenital erythropoietic porphyria)
1305	Protein	NP_000366	UROS	uroporphyrinogen III synthase (congenital erythropoietic porphyria)
1306	DNA	NM_000155	GALT	galactose-1-phosphate uridylyltransferase
1307	Protein	NP_000146	GALT	galactose-1-phosphate uridylyltransferase
1308	DNA	NM_147131	GALT	galactose-1-phosphate uridylyltransferase
1309	Protein	NP_667342	GALT	galactose-1-phosphate uridylyltransferase
1310	DNA	NM_147132	GALT	galactose-1-phosphate uridylyltransferase
1311	Protein	NP_667343	GALT	galactose-1-phosphate uridylyltransferase
1312	DNA	NM_000918	P4HB	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), beta polypeptide (protein disulfide isomerase; thyroid hormone binding protein p55)

1313	Protein	NP_000909	P4HB	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), beta polypeptide (protein disulfide isomerase; thyroid hormone binding protein p55)
1314	DNA	NM_005022	PFN1	profilin 1
1315	Protein	NP_005013	PFN1	profilin 1
1316	DNA	NM_001647	APOD	apolipoprotein D
1317	Protein	NP_001638	APOD	apolipoprotein D
1318	DNA	NM_153747		Cluster Incl. AB000359:Homo sapiens PIGCP1 pseudogene /cds=(0,416) /gb=AB000359 /gi=2547040 /ug=Hs.47974 /len=417
1319	Protein	NP_714969		Cluster Incl. AB000359:Homo sapiens PIGCP1 pseudogene /cds=(0,416) /gb=AB000359 /gi=2547040 /ug=Hs.47974 /len=417
1320	DNA	NM_002642		Cluster Incl. AB000359:Homo sapiens PIGCP1 pseudogene /cds=(0,416) /gb=AB000359 /gi=2547040 /ug=Hs.47974 /len=417
1321	DNA	AL080093		Homo sapiens mRNA; cDNA DKFZp564N1662 (from clone DKFZp564N1662), mRNA sequence
1322	DNA	NM_001831	CLU	clusterin (complement lysis inhibitor, SP-40,40, sulfated glycoprotein 2, testosterone-repressed prostate message 2, apolipoprotein J)
1323	Protein	NP_001822	CLU	clusterin (complement lysis inhibitor, SP-40,40, sulfated glycoprotein 2, testosterone-repressed prostate message 2, apolipoprotein J)
1324	DNA	NM_015852	H-plk	Krueppel-related zinc finger protein
1325	Protein	NP_056936	H-plk	Krueppel-related zinc finger protein
1326	DNA	NM_001318	CSHL1	chorionic somatomammotropin hormone-like 1
1327	Protein	NP_001309	CSHL1	chorionic somatomammotropin hormone-like 1
1328	DNA	NM_022578	CSHL1	chorionic somatomammotropin hormone-like 1
1329	Protein	NP_072100	CSHL1	chorionic somatomammotropin hormone-like 1
1330	DNA	NM_022579	CSHL1	chorionic somatomammotropin hormone-like 1
1331	Protein	NP_072101	CSHL1	chorionic somatomammotropin hormone-like 1
1332	DNA	NM_022580	CSHL1	chorionic somatomammotropin hormone-like 1

1333	Protein	NP_072102	CSHL1	chorionic somatomammotropin hormone-like 1
1334	DNA	NM_001540		28 kDa heat shock protein [Homo sapiens], mRNA sequence
1335	Protein	NP_001531		28 kDa heat shock protein [Homo sapiens], mRNA sequence
1336	DNA	NM_007104	RPL10A	ribosomal protein L10a
1337	Protein	NP_009035	RPL10A	ribosomal protein L10a
1338	DNA	NM_002778	PSAP	prosaposin (variant Gaucher disease and variant metachromatic leukodystrophy)
1339	Protein	NP_002769	PSAP	prosaposin (variant Gaucher disease and variant metachromatic leukodystrophy)
1340	DNA	NM_001466	FZD2	frizzled homolog 2 (Drosophila)
1341	Protein	NP_001457	FZD2	frizzled homolog 2 (Drosophila)
1342	DNA	NM_022735	GOCAP1	golgi complex associated protein 1, 60kDa
1343	Protein	NP_073572	GOCAP1	golgi complex associated protein 1, 60kDa
1344	DNA	AB002324	KIAA0326	KIAA0326 protein
1345	Protein	AB002324 (Translation)	KIAA0326	KIAA0326 protein
1346	DNA	NM_006845	KNSL6	kinesin-like 6 (mitotic centromere-associated kinesin)
1347	Protein	NP_006836	KNSL6	kinesin-like 6 (mitotic centromere-associated kinesin)
1348	DNA	NM_001254	CDC6	CDC6 cell division cycle 6 homolog (S. cerevisiae)
1349	Protein	NP_001245	CDC6	CDC6 cell division cycle 6 homolog (S. cerevisiae)
1350	DNA	D50926	NXP-2	nuclear matrix protein NXP-2
1351	Protein	D50926 (Translation)	NXP-2	nuclear matrix protein NXP-2
1352	DNA	NM_016199	LSM7	U6 snRNA-associated Sm-like protein LSm7
1353	Protein	NP_057283	LSM7	U6 snRNA-associated Sm-like protein LSm7
1354	DNA	NM_002853	RAD1	RAD1 homolog (S. pombe)
1355	Protein	NP_002844	RAD1	RAD1 homolog (S. pombe)
1356	DNA	NM_133282	RAD1	RAD1 homolog (S. pombe)
1357	Protein	NP_579816	RAD1	RAD1 homolog (S. pombe)
1358	DNA	NM_133377	RAD1	RAD1 homolog (S. pombe)
1359	DNA	NM_015169	RRS1	homolog of yeast ribosome biogenesis regulatory protein RRS1
1360	Protein	NP_055984	RRS1	homolog of yeast ribosome biogenesis regulatory protein RRS1
1361	DNA	AB028987	C19orf7	chromosome 19 open reading frame 7
1362	Protein	AB028987 (Translation)	C19orf7	chromosome 19 open reading frame 7
1363	DNA	NM_014213	HOXD9	homeo box D9

1364	Protein	NP_055028	HOXD9	homeo box D9
1365	DNA	NM_003344	UBE2H	ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast)
1366	Protein	NP_003335	UBE2H	ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast)
1367	DNA	NM_001665	ARHG	ras homolog gene family, member G (rho G)
1368	Protein	NP_001656	ARHG	ras homolog gene family, member G (rho G)
1369	DNA	NM_003188	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1370	Protein	NP_003179	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1371	DNA	NM_145331	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1372	Protein	NP_663304	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1373	DNA	NM_145332	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1374	Protein	NP_663305	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1375	DNA	NM_145333	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1376	Protein	NP_663306	MAP3K7	mitogen-activated protein kinase kinase kinase 7
1377	DNA	NM_003390	WEE1	WEE1 homolog (S. pombe)
1378	Protein	NP_003381	WEE1	WEE1 homolog (S. pombe)
1379	DNA	NM_006527	SLBP	stem-loop (histone) binding protein
1380	Protein	NP_006518	SLBP	stem-loop (histone) binding protein
1381	DNA	NM_000856	GUCY1A3	guanylate cyclase 1, soluble, alpha 3
1382	Protein	NP_000847	GUCY1A3	guanylate cyclase 1, soluble, alpha 3
1383	DNA	NM_002748	MAPK6	mitogen-activated protein kinase 6
1384	Protein	NP_002739	MAPK6	mitogen-activated protein kinase 6
1385	DNA	NM_007145	ZNF146	zinc finger protein 146
1386	Protein	NP_009076	ZNF146	zinc finger protein 146
1387	DNA	NM_003186	TAGLN	transgelin
1388	Protein	NP_003177	TAGLN	transgelin
1389	DNA	NM_014761	KIAA0174	KIAA0174 gene product
1390	Protein	NP_055576	KIAA0174	KIAA0174 gene product
1391	DNA	NM_001396	DYRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A
1392	Protein	NP_001387	DYRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A
1393	DNA	NM_101395	DYRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A
1394	Protein	NP_567824	DYRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A

1395	DNA	NM_130436	DYRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A
1396	Protein	NP_569120	DYRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A
1397	DNA	NM_000182	HADHA	hydroxyacyl-Coenzyme A dehydrogenase/3-ketoacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), alpha subunit
1398	Protein	NP_000173	HADHA	hydroxyacyl-Coenzyme A dehydrogenase/3-ketoacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), alpha subunit
1399	DNA	NM_005359	MADH4	MAD, mothers against decapentaplegic homolog 4 (Drosophila)
1400	Protein	NP_005350	MADH4	MAD, mothers against decapentaplegic homolog 4 (Drosophila)
1401	DNA	NM_012408	PRKCBP1	protein kinase C binding protein 1
1402	Protein	NP_036540	PRKCBP1	protein kinase C binding protein 1
1403	DNA	AL050353	OIP2	Opa-interacting protein 2
1404	DNA	NM_004181	UCHL1	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)
1405	Protein	NP_004172	UCHL1	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)
1406	DNA	NM_005626	SFRS4	splicing factor, arginine/serine-rich 4
1407	Protein	NP_005617	SFRS4	splicing factor, arginine/serine-rich 4
1408	DNA	NM_001694	ATP6V0C	ATPase, H+ transporting, lysosomal 16kDa, V0 subunit c
1409	Protein	NP_001685	ATP6V0C	ATPase, H+ transporting, lysosomal 16kDa, V0 subunit c
1410	DNA	M88249		Cluster Incl. M88249:Human inter-alpha-trypsin inhibitor light chain (ITI) gene /cds=(94,1152) /gb=M88249 /gi=186599 /ug=Hs.76177 /len=1262
1411	Protein	AAA59196		Cluster Incl. M88249:Human inter-alpha-trypsin inhibitor light chain (ITI) gene /cds=(94,1152) /gb=M88249 /gi=186599 /ug=Hs.76177 /len=1262
1412	DNA	M80899	AHNAK	AHNAK nucleoprotein (desmoyokin)

1413	Protein	M80899 (Translation)	AHNAK	AHNAK nucleoprotein (desmoyokin)
1414	DNA	NM_014611	MDN1	MDN1, midasin homolog (yeast)
1415	Protein	NP_055426	MDN1	MDN1, midasin homolog (yeast)
1416	DNA	NM_002167	ID3	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein
1417	Protein	NP_002158	ID3	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein
1418	DNA	NM_003300	TRAF3	TNF receptor-associated factor 3
1419	Protein	NP_003291	TRAF3	TNF receptor-associated factor 3
1420	DNA	NM_145725	TRAF3	TNF receptor-associated factor 3
1421	DNA	NM_145726	TRAF3	TNF receptor-associated factor 3
1422	Protein	NP_663778	TRAF3	TNF receptor-associated factor 3
1423	DNA	NM_001462	FPRL1	formyl peptide receptor-like 1
1424	Protein	NP_001453	FPRL1	formyl peptide receptor-like 1
1425	DNA	NM_005649	ZNF354A	zinc finger protein 354A
1426	Protein	NP_005640	ZNF354A	zinc finger protein 354A
1427	DNA	NM_001399	ED1	ectodermal dysplasia 1, anhidrotic
1428	Protein	NP_001390	ED1	ectodermal dysplasia 1, anhidrotic
1429	DNA	NM_014458	AB026190	Kelch motif containing protein
1430	Protein	NP_055273	AB026190	Kelch motif containing protein
1431	DNA	NM_001813	CENPE	centromere protein E, 312kDa
1432	Protein	NP_001804	CENPE	centromere protein E, 312kDa
1433	DNA	NM_002437	MPV17	MpV17 transgene, murine homolog, glomerulosclerosis
1434	Protein	NP_002428	MPV17	MpV17 transgene, murine homolog, glomerulosclerosis
1435	DNA	NM_012474	UMPK	uridine monophosphate kinase
1436	Protein	NP_036606	UMPK	uridine monophosphate kinase
1437	DNA	NM_012304	FBXL7	F-box and leucine-rich repeat protein 7
1438	Protein	NP_036436	FBXL7	F-box and leucine-rich repeat protein 7
1439	DNA	NM_005030	PLK	polo-like kinase (Drosophila)
1440	Protein	NP_005021	PLK	polo-like kinase (Drosophila)
1441	DNA	NM_001184	ATR	ataxia telangiectasia and Rad3 related
1442	Protein	NP_001175	ATR	ataxia telangiectasia and Rad3 related
1443	DNA	NM_014851	KIAA0469	KIAA0469 gene product
1444	Protein	NP_055666	KIAA0469	KIAA0469 gene product
1445	DNA	NM_021222	HTCD37	TcD37 homolog
1446	Protein	NP_067045	HTCD37	TcD37 homolog
1447	DNA	NM_005691	ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9

1448	Protein	NP_005682	ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9
1449	DNA	NM_020297	ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9
1450	Protein	NP_064693	ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9
1451	DNA	NM_020298	ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9
1452	Protein	NP_064694	ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9
1453	DNA	NM_003377	VEGFB	vascular endothelial growth factor B
1454	Protein	NP_003368	VEGFB	vascular endothelial growth factor B
1455	DNA	NM_005254	GABPB1	GA binding protein transcription factor, beta subunit 1, 53kDa
1456	Protein	NP_005245	GABPB1	GA binding protein transcription factor, beta subunit 1, 53kDa
1457	DNA	NM_016654	GABPB1	GA binding protein transcription factor, beta subunit 1, 53kDa
1458	Protein	NP_057738	GABPB1	GA binding protein transcription factor, beta subunit 1, 53kDa
1459	DNA	NM_014745	KIAA0233	KIAA0233 gene product
1460	Protein	NP_055560	KIAA0233	KIAA0233 gene product
1461	DNA	NM_014757	MAML1	mastermind-like 1 (Drosophila)
1462	Protein	NP_055572	MAML1	mastermind-like 1 (Drosophila)
1463	DNA	NM_014756	KIAA0097	KIAA0097 gene product
1464	Protein	NP_055571	KIAA0097	KIAA0097 gene product
1465	DNA	NM_002095	GTF2E2	general transcription factor IIE, polypeptide 2, beta 34kDa
1466	Protein	NP_002086	GTF2E2	general transcription factor IIE, polypeptide 2, beta 34kDa
1467	DNA	Z84718		Z84718 /FEATURE=cds#3 /DEFINITION=HS322B1 Human DNA sequence from clone 322B1 on chromosome 22q11-12, complete sequence [Homo sapiens]
1468	DNA	AB002323	DNCH1	dynein, cytoplasmic, heavy polypeptide 1
1469	Protein	AB002323 (Translation)	DNCH1	dynein, cytoplasmic, heavy polypeptide 1
1470	DNA	NM_002070	GNAI2	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2
1471	Protein	NP_002061	GNAI2	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2

1472	DNA	NM_006755	TALDO1	transaldolase 1
1473	Protein	NP_006746	TALDO1	transaldolase 1
1474	DNA	NM_014755	TRIP-Br2	transcriptional regulator interacting with the PHS-bromodomain 2
1475	Protein	NP_055570	TRIP-Br2	transcriptional regulator interacting with the PHS-bromodomain 2
1476	DNA	U80017		Cluster Incl. U80017:Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (naip) and survival motor neuron protein (smn) genes, complete cds /cds=(33,917) /gb=U80017 /gi=1737211 /ug=Hs.77306 /len
1477	Protein	U80017 (Translation)		Cluster Incl. U80017:Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (naip) and survival motor neuron protein (smn) genes, complete cds /cds=(33,917) /gb=U80017 /gi=1737211 /ug=Hs.77306 /len
1478	DNA	NM_018453	C14orf11	chromosome 14 open reading frame 11
1479	Protein	NP_060923	C14orf11	chromosome 14 open reading frame 11
1480	DNA	U93305		Cluster Incl. U93305:Homo sapiens A4 differentiation-dependent protein (A4), triple LIM domain protein (LMO6), and synaptophysin (SYP) genes, complete cds; and calcium channel alpha-1 subunit (CACNA1F) gene, partial cds /cds=(75,533) /gb=U93305 /gi=270759
1481	Protein	AAB92359		Cluster Incl. U93305:Homo sapiens A4 differentiation-dependent protein (A4), triple LIM domain protein (LMO6), and synaptophysin (SYP) genes, complete cds; and calcium channel alpha-1 subunit (CACNA1F) gene, partial cds /cds=(75,533) /gb=U93305 /gi=270759
1482	DNA	NM_007103	NDUFV1	NADH dehydrogenase (ubiquinone) flavoprotein 1, 51kDa
1483	Protein	NP_009034	NDUFV1	NADH dehydrogenase (ubiquinone) flavoprotein 1, 51kDa
1484	DNA	NM_002766	PRPSAP1	phosphoribosyl pyrophosphate synthetase-associated protein 1

1485	Protein	NP_002757	PRPSAP1	phosphoribosyl pyrophosphate synthetase-associated protein 1
1486	DNA	NM_001662	ARF5	ADP-ribosylation factor 5
1487	Protein	NP_001653	ARF5	ADP-ribosylation factor 5
1488	DNA	NM_002346	LY6E	lymphocyte antigen 6 complex, locus E
1489	Protein	NP_002337	LY6E	lymphocyte antigen 6 complex, locus E
1490	DNA	NM_006736	DNAJB2	DnaJ (Hsp40) homolog, subfamily B, member 2
1491	Protein	NP_006727	DNAJB2	DnaJ (Hsp40) homolog, subfamily B, member 2
1492	DNA	NM_006801	KDELR1	KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 1
1493	Protein	NP_006792	KDELR1	KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 1
1494	DNA	NM_004231	ATP6V1F	ATPase, H+ transporting, lysosomal 14kDa, V1 subunit F
1495	Protein	NP_004222	ATP6V1F	ATPase, H+ transporting, lysosomal 14kDa, V1 subunit F
1496	DNA	NM_000516	GNAS	GNAS complex locus
1497	Protein	NP_000507	GNAS	GNAS complex locus
1498	DNA	NM_016592	GNAS	GNAS complex locus
1499	Protein	NP_057676	GNAS	GNAS complex locus
1500	DNA	NM_080425	GNAS	GNAS complex locus
1501	Protein	NP_536350	GNAS	GNAS complex locus
1502	DNA	NM_002618	PEX13	peroxisome biogenesis factor 13
1503	Protein	NP_002609	PEX13	peroxisome biogenesis factor 13
1504	DNA	NM_006638	RPP40	ribonuclease P, 40kD subunit
1505	Protein	NP_006629	RPP40	ribonuclease P, 40kD subunit
1506	DNA	NM_017544	NRF	transcription factor NRF
1507	Protein	NP_060014	NRF	transcription factor NRF
1508	DNA	AC004893		Cluster Incl. AC004893:Homo sapiens PAC clone DJ0808A01 from 7q21.1-q31.1 /cds=(0,2138) /gb=AC004893 /gi=3694662 /ug=Hs.119120 /len=2139
1509	DNA	NM_005063	SCD	stearoyl-CoA desaturase (delta-9-desaturase)
1510	Protein	NP_005054	SCD	stearoyl-CoA desaturase (delta-9-desaturase)
1511	DNA	NM_012345	NUFIP1	nuclear fragile X mental retardation protein interacting protein 1
1512	Protein	NP_036477	NUFIP1	nuclear fragile X mental retardation protein interacting protein 1
1513	DNA	NM_004379	CREB1	cAMP responsive element binding protein 1
1514	Protein	NP_004370	CREB1	cAMP responsive element binding protein 1

1515	DNA	NM_134442	CREB1	cAMP responsive element binding protein 1
1516	Protein	NP_604391	CREB1	cAMP responsive element binding protein 1
1517	DNA	D86961	LHFPL2	lipoma HMGIC fusion partner-like 2
1518	Protein	D86961 (Translation)	LHFPL2	lipoma HMGIC fusion partner-like 2
1519	DNA	AL031778		Cluster Incl. AL031778:dJ34B21.4.1 (nuclear transcription factor Y, alpha (CCAAT-Binding transcription factor subunit B, CBF-B, CAAT-Box DNA binding pr /cds=(175,1218) /gb=AL031778 /gi=4153958 /ug=Hs.797 /len=3778
1520	DNA	NM_015517	MIZF	MBD2 (methyl-CpG-binding protein)-interacting zinc finger protein
1521	Protein	NP_056332	MIZF	MBD2 (methyl-CpG-binding protein)-interacting zinc finger protein
1522	DNA	X98834	SALL2	sal-like 2 (Drosophila)
1523	DNA	NM_004425	ECM1	extracellular matrix protein 1
1524	Protein	NP_004416	ECM1	extracellular matrix protein 1
1525	DNA	NM_022664	ECM1	extracellular matrix protein 1
1526	Protein	NP_073155	ECM1	extracellular matrix protein 1
1527	DNA	NM_000156	GAMT	guanidinoacetate N-methyltransferase
1528	Protein	NP_000147	GAMT	guanidinoacetate N-methyltransferase
1529	DNA	NM_138924	GAMT	guanidinoacetate N-methyltransferase
1530	Protein	NP_620279	GAMT	guanidinoacetate N-methyltransferase
1531	DNA	NM_018224	FLJ10803	hypothetical protein FLJ10803
1532	Protein	NP_060694	FLJ10803	hypothetical protein FLJ10803
1533	DNA	NM_018999	KIAA1128	KIAA1128 protein
1534	Protein	NP_061872	KIAA1128	KIAA1128 protein
1535	DNA	NM_004502	HOXB7	homeo box B7
1536	Protein	NP_004493	HOXB7	homeo box B7
1537	DNA	NM_017790	RGS3	regulator of G-protein signalling 3
1538	Protein	NP_060260	RGS3	regulator of G-protein signalling 3
1539	DNA	NM_021106	RGS3	regulator of G-protein signalling 3
1540	Protein	NP_066929	RGS3	regulator of G-protein signalling 3
1541	DNA	NM_130795	RGS3	regulator of G-protein signalling 3
1542	Protein	NP_570613	RGS3	regulator of G-protein signalling 3
1543	DNA	NM_134427	RGS3	regulator of G-protein signalling 3

1544	Protein	NP_602299	RGS3	regulator of G-protein signalling 3
1545	DNA	NM_032182	KIAA0157	KIAA0157 protein
1546	Protein	NP_115558	KIAA0157	KIAA0157 protein
1547	DNA	NM_013446	MKRN1	makorin, ring finger protein, 1
1548	Protein	NP_038474	MKRN1	makorin, ring finger protein, 1
1549	DNA	NM_015156	RCOR	REST corepressor
1550	Protein	NP_055971	RCOR	REST corepressor
1551	DNA	NM_001682	ATP2B1	ATPase, Ca++ transporting, plasma membrane 1
1552	Protein	NP_001673	ATP2B1	ATPase, Ca++ transporting, plasma membrane 1
1553	DNA	NM_003342	UBE2G1	ubiquitin-conjugating enzyme E2G 1 (UBC7 homolog, C. elegans)
1554	Protein	NP_003333	UBE2G1	ubiquitin-conjugating enzyme E2G 1 (UBC7 homolog, C. elegans)
1555	DNA	NM_003470	USP7	ubiquitin specific protease 7 (herpes virus-associated)
1556	Protein	NP_003461	USP7	ubiquitin specific protease 7 (herpes virus-associated)
1557	DNA	NM_000688	ALAS1	aminolevulinate, delta-, synthase 1
1558	Protein	NP_000679	ALAS1	aminolevulinate, delta-, synthase 1
1559	DNA	NM_005153	USP10	ubiquitin specific protease 10
1560	Protein	NP_005144	USP10	ubiquitin specific protease 10
1561	DNA	NM_003362	UNG	uracil-DNA glycosylase
1562	Protein	NP_003353	UNG	uracil-DNA glycosylase
1563	DNA	NM_080911	UNG	uracil-DNA glycosylase
1564	Protein	NP_550433	UNG	uracil-DNA glycosylase
1565	DNA	NM_015153	PHF3	PHD finger protein 3
1566	Protein	NP_055968	PHF3	PHD finger protein 3
1567	DNA	NM_003488	AKAP1	A kinase (PRKA) anchor protein 1
1568	Protein	NP_003479	AKAP1	A kinase (PRKA) anchor protein 1
1569	DNA	NM_139275	AKAP1	A kinase (PRKA) anchor protein 1
1570	Protein	NP_644804	AKAP1	A kinase (PRKA) anchor protein 1
1571	DNA	NM_004582	RABGGTB	Rab geranylgeranyltransferase, beta subunit
1572	Protein	NP_004573	RABGGTB	Rab geranylgeranyltransferase, beta subunit
1573	DNA	NM_002713	PPP1R8	protein phosphatase 1, regulatory (inhibitor) subunit 8
1574	Protein	NP_002704	PPP1R8	protein phosphatase 1, regulatory (inhibitor) subunit 8
1575	DNA	NM_014110	PPP1R8	protein phosphatase 1, regulatory (inhibitor) subunit 8
1576	Protein	NP_054829	PPP1R8	protein phosphatase 1, regulatory (inhibitor) subunit 8
1577	DNA	NM_138558	PPP1R8	protein phosphatase 1, regulatory (inhibitor) subunit 8

1578	Protein	NP_612568	PPP1R8	protein phosphatase 1, regulatory (inhibitor) subunit 8
1579	DNA	NM_004354		Homo sapiens mRNA; cDNA DKFZp434B142 (from clone DKFZp434B142), mRNA sequence
1580	Protein	NP_004345		Homo sapiens mRNA; cDNA DKFZp434B142 (from clone DKFZp434B142), mRNA sequence
1581	DNA	NM_012234	RYBP	RING1 and YY1 binding protein
1582	Protein	NP_036366	RYBP	RING1 and YY1 binding protein
1583	DNA	NM_001315	MAPK14	mitogen-activated protein kinase 14
1584	Protein	NP_001306	MAPK14	mitogen-activated protein kinase 14
1585	DNA	NM_139012	MAPK14	mitogen-activated protein kinase 14
1586	Protein	NP_620581	MAPK14	mitogen-activated protein kinase 14
1587	DNA	NM_139013	MAPK14	mitogen-activated protein kinase 14
1588	Protein	NP_620582	MAPK14	mitogen-activated protein kinase 14
1589	DNA	NM_139014	MAPK14	mitogen-activated protein kinase 14
1590	Protein	NP_620583	MAPK14	mitogen-activated protein kinase 14
1591	DNA	NM_014962	BTBD3	BTB (POZ) domain containing 3
1592	Protein	NP_055777	BTBD3	BTB (POZ) domain containing 3
1593	DNA	NM_006340	BAIAP2	BAI1-associated protein 2
1594	Protein	NP_006331	BAIAP2	BAI1-associated protein 2
1595	DNA	NM_017450	BAIAP2	BAI1-associated protein 2
1596	Protein	NP_059344	BAIAP2	BAI1-associated protein 2
1597	DNA	NM_017451	BAIAP2	BAI1-associated protein 2
1598	Protein	NP_059345	BAIAP2	BAI1-associated protein 2
1599	DNA	AL049227		Homo sapiens mRNA; cDNA DKFZp564N1116 (from clone DKFZp564N1116), mRNA sequence
1600	DNA	NM_012066	20D7-FC4	hypothetical protein 20D7-FC4
1601	Protein	NP_036198	20D7-FC4	hypothetical protein 20D7-FC4
1602	DNA	NM_006675	NET-5	transmembrane 4 superfamily member tetraspan NET-5
1603	Protein	NP_006666	NET-5	transmembrane 4 superfamily member tetraspan NET-5
1604	DNA	AL080062	DKFZP564I122	DKFZP564I122 protein
1605	Protein	AL080062 (Translation)	DKFZP564I122	DKFZP564I122 protein

1606	DNA	NM_005677	COLQ	collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase
1607	Protein	NP_005668	COLQ	collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase
1608	DNA	NM_080538	COLQ	collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase
1609	Protein	NP_536799	COLQ	collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase
1610	DNA	NM_080539	COLQ	collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase
1611	Protein	NP_536800	COLQ	collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase
1612	DNA	NM_015064	ELKS	ELKS protein
1613	Protein	NP_055879	ELKS	ELKS protein
1614	DNA	NM_005513	GTF2E1	general transcription factor IIE, polypeptide 1, alpha 56kDa
1615	Protein	NP_005504	GTF2E1	general transcription factor IIE, polypeptide 1, alpha 56kDa
1616	DNA	NM_013310	AF038169	hypothetical protein AF038169
1617	Protein	NP_037442	AF038169	hypothetical protein AF038169
1618	DNA	NM_003846	PEX11B	peroxisomal biogenesis factor 11B
1619	Protein	NP_003837	PEX11B	peroxisomal biogenesis factor 11B
1620	DNA	NM_014602	PIK3R4	phosphoinositide-3-kinase, regulatory subunit 4, p150
1621	Protein	NP_055417	PIK3R4	phosphoinositide-3-kinase, regulatory subunit 4, p150
1622	DNA	NM_012151	F8A	coagulation factor VIII-associated (intronic transcript)
1623	Protein	NP_036283	F8A	coagulation factor VIII-associated (intronic transcript)
1624	DNA	NM_005334	HCFC1	host cell factor C1 (VP16-accessory protein)
1625	Protein	NP_005325	HCFC1	host cell factor C1 (VP16-accessory protein)
1626	DNA	NM_004295	TRAF4	TNF receptor-associated factor 4
1627	Protein	NP_004286	TRAF4	TNF receptor-associated factor 4
1628	DNA	NM_145751	TRAF4	TNF receptor-associated factor 4
1629	Protein	NP_665694	TRAF4	TNF receptor-associated factor 4
1630	DNA	NM_019005	FLJ20323	hypothetical protein FLJ20323

1631	Protein	NP_061878	FLJ20323	hypothetical protein FLJ20323
1632	DNA	NM_002653	PITX1	paired-like homeodomain transcription factor 1
1633	Protein	NP_002644	PITX1	paired-like homeodomain transcription factor 1
1634	DNA	NM_001810	CENPB	centromere protein B, 80kDa
1635	Protein	NP_001801	CENPB	centromere protein B, 80kDa
1636	DNA	NM_004239	TRIP11	thyroid hormone receptor interactor 11
1637	Protein	NP_004230	TRIP11	thyroid hormone receptor interactor 11
1638	DNA	NM_006910	RBBP6	retinoblastoma binding protein 6
1639	Protein	NP_008841	RBBP6	retinoblastoma binding protein 6
1640	DNA	NM_004697	PRPF4	PRP4 pre-mRNA processing factor 4 homolog (yeast)
1641	Protein	NP_004688	PRPF4	PRP4 pre-mRNA processing factor 4 homolog (yeast)
1642	DNA	NM_018096	FLJ10458	hypothetical protein similar to beta-transducin family
1643	Protein	NP_060566	FLJ10458	hypothetical protein similar to beta-transducin family
1644	DNA	NM_014255	TMEM4	transmembrane protein 4
1645	Protein	NP_055070	TMEM4	transmembrane protein 4
1646	DNA	NM_014001	GGA3	golgi associated, gamma adaptin ear containing, ARF binding protein 3
1647	Protein	NP_054720	GGA3	golgi associated, gamma adaptin ear containing, ARF binding protein 3
1648	DNA	NM_138619	GGA3	golgi associated, gamma adaptin ear containing, ARF binding protein 3
1649	Protein	NP_619525	GGA3	golgi associated, gamma adaptin ear containing, ARF binding protein 3
1650	DNA	NM_003629	PIK3R3	phosphoinositide-3-kinase, regulatory subunit, polypeptide 3 (p55, gamma)
1651	Protein	NP_003620	PIK3R3	phosphoinositide-3-kinase, regulatory subunit, polypeptide 3 (p55, gamma)
1652	DNA	NM_153250	MGC40413	hypothetical protein MGC40413
1653	Protein	NP_694982	MGC40413	hypothetical protein MGC40413
1654	DNA	NM_001663	ARF6	ADP-ribosylation factor 6
1655	Protein	NP_001654	ARF6	ADP-ribosylation factor 6
1656	DNA	NM_001687	ATP5D	ATP synthase, H+ transporting, mitochondrial F1 complex, delta subunit
1657	Protein	NP_001678	ATP5D	ATP synthase, H+ transporting, mitochondrial F1 complex, delta subunit
1658	DNA	NM_001894	CSNK1E	casein kinase 1, epsilon
1659	Protein	NP_001885	CSNK1E	casein kinase 1, epsilon

1660	DNA	NM_152221	CSNK1E	casein kinase 1, epsilon
1661	DNA	NM_005871	SPF30	splicing factor 30, survival of motor neuron-related
1662	Protein	NP_005862	SPF30	splicing factor 30, survival of motor neuron-related
1663	DNA	AL080234		Homo sapiens clone FBD3 Cri-du-chat critical region mRNA, mRNA sequence
1664	DNA	NM_003799	RNMT	RNA (guanine-7-) methyltransferase
1665	Protein	NP_003790	RNMT	RNA (guanine-7-) methyltransferase
1666	DNA	NM_015144	BDG-29	BDG-29 proten
1667	Protein	NP_055959	BDG-29	BDG-29 proten
1668	DNA	NM_032909	BDG-29	BDG-29 proten
1669	DNA	AB014542	TNRC15	trinucleotide repeat containing 15
1670	Protein	AB014542 (Translation)	TNRC15	trinucleotide repeat containing 15
1671	DNA	NM_001359	DECR1	2,4-dienoyl CoA reductase 1, mitochondrial
1672	Protein	NP_001350	DECR1	2,4-dienoyl CoA reductase 1, mitochondrial
1673	DNA	NM_023012	FLJ11021	hypothetical protein FLJ11021 similar to splicing factor, arginine/serine-rich 4
1674	Protein	NP_075388	FLJ11021	hypothetical protein FLJ11021 similar to splicing factor, arginine/serine-rich 4
1675	DNA	NM_006265	RAD21	RAD21 homolog (S. pombe)
1676	Protein	NP_006256	RAD21	RAD21 homolog (S. pombe)
1677	DNA	NM_007275	FUS1	lung cancer candidate
1678	Protein	NP_009206	FUS1	lung cancer candidate
1679	DNA	NM_002391	MDK	midkine (neurite growth-promoting factor 2)
1680	Protein	NP_002382	MDK	midkine (neurite growth-promoting factor 2)
1681	DNA	NM_007061	CDC42EP1	CDC42 effector protein (Rho GTPase binding) 1
1682	Protein	NP_008992	CDC42EP1	CDC42 effector protein (Rho GTPase binding) 1
1683	DNA	NM_152243	CDC42EP1	CDC42 effector protein (Rho GTPase binding) 1
1684	Protein	NP_689449	CDC42EP1	CDC42 effector protein (Rho GTPase binding) 1
1685	DNA	NM_005620	S100A11	S100 calcium binding protein A11 (calgizzarin)
1686	Protein	NP_005611	S100A11	S100 calcium binding protein A11 (calgizzarin)
1687	DNA	NM_004075	CRY1	cryptochrome 1 (photolyase-like)
1688	Protein	NP_004066	CRY1	cryptochrome 1 (photolyase-like)
1689	DNA	NM_017503	SURF2	surfeit 2
1690	Protein	NP_059973	SURF2	surfeit 2

1691	DNA	NM_001478	GALGT	UDP-N-acetyl-alpha-D-galactosamine:(N-acetylneuraminyl)-galactosylglucosylceramide N-acetylgalactosaminyltransferase (GalNAc-T)
1692	Protein	NP_001469	GALGT	UDP-N-acetyl-alpha-D-galactosamine:(N-acetylneuraminyl)-galactosylglucosylceramide N-acetylgalactosaminyltransferase (GalNAc-T)
1693	DNA	NM_000110	DPYD	dihydropyrimidine dehydrogenase
1694	Protein	NP_000101	DPYD	dihydropyrimidine dehydrogenase
1695	DNA	D26488	KIAA0007	KIAA0007 protein
1696	Protein	D26488 (Translation)	KIAA0007	KIAA0007 protein
1697	DNA	NM_002475	MLC1SA	myosin light chain 1 slow a
1698	Protein	NP_002466	MLC1SA	myosin light chain 1 slow a
1699	DNA	W21827	DKFZP564O0 92	DKFZP564O0092 protein
1700	DNA	NM_002496	NDUFS8	NADH dehydrogenase (ubiquinone) Fe-S protein 8, 23kDa (NADH-coenzyme Q reductase)
1701	Protein	NP_002487	NDUFS8	NADH dehydrogenase (ubiquinone) Fe-S protein 8, 23kDa (NADH-coenzyme Q reductase)
1702	DNA	NM_031206	FLJ12525	hypothetical protein FLJ12525
1703	Protein	NP_112483	FLJ12525	hypothetical protein FLJ12525
1704	DNA	NM_002871	RABIF	RAB interacting factor
1705	Protein	NP_002862	RABIF	RAB interacting factor
1706	DNA	NM_003631	PARG	poly (ADP-ribose) glycohydrolase
1707	Protein	NP_003622	PARG	poly (ADP-ribose) glycohydrolase
1708	DNA	NM_007026	DUSP14	dual specificity phosphatase 14
1709	Protein	NP_008957	DUSP14	dual specificity phosphatase 14
1710	DNA	NM_007024	PL6	PL6 protein
1711	Protein	NP_008955	PL6	PL6 protein
1712	DNA	NM_003815	ADAM15	a disintegrin and metalloproteinase domain 15 (metargidin)
1713	Protein	NP_003806	ADAM15	a disintegrin and metalloproteinase domain 15 (metargidin)
1714	DNA	NM_004215	EBAG9	estrogen receptor binding site associated, antigen, 9
1715	Protein	NP_004206	EBAG9	estrogen receptor binding site associated, antigen, 9
1716	DNA	NM_006421	BIG1	brefeldin A-inhibited guanine nucleotide-exchange protein 1
1717	Protein	NP_006412	BIG1	brefeldin A-inhibited guanine nucleotide-exchange protein 1
1718	DNA	NM_014284	NCDN	neurochondrin

1719	Protein	NP_055099	NCDN	neurochondrin
1720	DNA	NM_021809	TGIF2	TGFB-induced factor 2 (TALE family homeobox)
1721	Protein	NP_068581	TGIF2	TGFB-induced factor 2 (TALE family homeobox)
1722	DNA	NM_015125	CIC	capicua homolog (Drosophila)
1723	Protein	NP_055940	CIC	capicua homolog (Drosophila)
1724	DNA	NM_004897	MINPP1	multiple inositol polyphosphate histidine phosphatase, 1
1725	Protein	NP_004888	MINPP1	multiple inositol polyphosphate histidine phosphatase, 1
1726	DNA	NM_006928	SILV	silver homolog (mouse)
1727	Protein	NP_008859	SILV	silver homolog (mouse)
1728	DNA	NM_015288	KIAA0239	KIAA0239 protein
1729	Protein	NP_056103	KIAA0239	KIAA0239 protein
1730	DNA	NM_006322	TUBGCP3	tubulin, gamma complex associated protein 3
1731	Protein	NP_006313	TUBGCP3	tubulin, gamma complex associated protein 3
1732	DNA	AL049321		Homo sapiens mRNA; cDNA DKFZp564D156 (from clone DKFZp564D156), mRNA sequence
1733	DNA	NM_007010	ROK1	ATP-dependent RNA helicase
1734	Protein	NP_008941	ROK1	ATP-dependent RNA helicase
1735	DNA	NM_152300	ROK1	ATP-dependent RNA helicase
1736	Protein	NP_689513	ROK1	ATP-dependent RNA helicase
1737	DNA	NM_001155	ANXA6	annexin A6
1738	Protein	NP_001146	ANXA6	annexin A6
1739	DNA	NM_004033	ANXA6	annexin A6
1740	Protein	NP_004024	ANXA6	annexin A6
1741	DNA	NM_007005	BCE-1	BCE-1 protein
1742	Protein	NP_008936	BCE-1	BCE-1 protein
1743	DNA	NM_000202	IDS	iduronate 2-sulfatase (Hunter syndrome)
1744	Protein	NP_000193	IDS	iduronate 2-sulfatase (Hunter syndrome)
1745	DNA	NM_006123	IDS	iduronate 2-sulfatase (Hunter syndrome)
1746	Protein	NP_006114	IDS	iduronate 2-sulfatase (Hunter syndrome)
1747	DNA	NM_000018	ACADVL	acyl-Coenzyme A dehydrogenase, very long chain
1748	Protein	NP_000009	ACADVL	acyl-Coenzyme A dehydrogenase, very long chain
1749	DNA	NM_006766	ZNF220	zinc finger protein 220
1750	Protein	NP_006757	ZNF220	zinc finger protein 220
1751	DNA	NM_003682	MADD	MAP-kinase activating death domain
1752	Protein	NP_003673	MADD	MAP-kinase activating death domain
1753	DNA	NM_130470	MADD	MAP-kinase activating death domain
1754	Protein	NP_569826	MADD	MAP-kinase activating death domain
1755	DNA	NM_130471	MADD	MAP-kinase activating death domain

1756	Protein	NP_569827	MADD	MAP-kinase activating death domain
1757	DNA	NM_130472	MADD	MAP-kinase activating death domain
1758	Protein	NP_569828	MADD	MAP-kinase activating death domain
1759	DNA	AF070546	DKFZp451J0118	hypothetical protein DKFZp451J0118
1760	DNA	NM_001450	FHL2	four and a half LIM domains 2
1761	Protein	NP_001441	FHL2	four and a half LIM domains 2
1762	DNA	NM_007359	MLN51	MLN51 protein
1763	Protein	NP_031385	MLN51	MLN51 protein
1764	DNA	AA015605	FLJ20811	hypothetical protein FLJ20811
1765	DNA	NM_006830	UQCR	ubiquinol-cytochrome c reductase (6.4kD) subunit
1766	Protein	NP_006821	UQCR	ubiquinol-cytochrome c reductase (6.4kD) subunit
1767	DNA	NM_006302	GCS1	glucosidase I
1768	Protein	NP_006293	GCS1	glucosidase I
1769	DNA	NM_001383	DPH2L1	diptheria toxin resistance protein required for diphthamide biosynthesis-like 1 (S. cerevisiae)
1770	Protein	NP_001374	DPH2L1	diptheria toxin resistance protein required for diphthamide biosynthesis-like 1 (S. cerevisiae)
1771	DNA	NM_004592	SFRS8	splicing factor, arginine/serine-rich 8 (suppressor-of-white-apricot homolog, Drosophila)
1772	Protein	NP_004583	SFRS8	splicing factor, arginine/serine-rich 8 (suppressor-of-white-apricot homolog, Drosophila)
1773	DNA	NM_152235	SFRS8	splicing factor, arginine/serine-rich 8 (suppressor-of-white-apricot homolog, Drosophila)
1774	Protein	NP_689421	SFRS8	splicing factor, arginine/serine-rich 8 (suppressor-of-white-apricot homolog, Drosophila)
1775	DNA	NM_015029	POP1	processing of precursors 1
1776	Protein	NP_055844	POP1	processing of precursors 1
1777	DNA	NM_014783	ARHGAP11A	KIAA0013 gene product
1778	Protein	NP_055598	ARHGAP11A	KIAA0013 gene product
1779	DNA	NM_002936	RNASEH1	ribonuclease H1
1780	Protein	NP_002927	RNASEH1	ribonuclease H1
1781	DNA	NM_005802	TP53BPL	tumor protein p53-binding protein
1782	Protein	NP_005793	TP53BPL	tumor protein p53-binding protein
1783	DNA	NM_002072		Homo sapiens mRNA; cDNA DKFZp686D0521 (from clone DKFZp686D0521), mRNA sequence
1784	Protein	NP_002063		Homo sapiens mRNA; cDNA DKFZp686D0521 (from clone DKFZp686D0521), mRNA sequence

1785	DNA	NM_000578	SLC11A1	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
1786	Protein	NP_000569	SLC11A1	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
1787	DNA	NM_000421	KRT10	keratin 10 (epidermolytic hyperkeratosis; keratosis palmaris et plantaris)
1788	Protein	NP_000412	KRT10	keratin 10 (epidermolytic hyperkeratosis; keratosis palmaris et plantaris)
1789	DNA	NM_006349	CG1I	putative cyclin G1 interacting protein
1790	Protein	NP_006340	CG1I	putative cyclin G1 interacting protein
1791	DNA	AC002073		Cluster Incl. AC002073:Human PAC clone DJ515N1 from 22q11.2-q22 /cds=(0,2201) /gb=AC002073 /gi=2078469 /ug=Hs.100623 /len=2202
1792	Protein	AAB54054		Cluster Incl. AC002073:Human PAC clone DJ515N1 from 22q11.2-q22 /cds=(0,2201) /gb=AC002073 /gi=2078469 /ug=Hs.100623 /len=2202
1793	DNA	NM_002126	HLF	hepatic leukemia factor
1794	Protein	NP_002117	HLF	hepatic leukemia factor
1795	DNA	NM_006280	SSR4	signal sequence receptor, delta (translocon-associated protein delta)
1796	Protein	NP_006271	SSR4	signal sequence receptor, delta (translocon-associated protein delta)
1797	DNA	NM_007263	COPE	coatomer protein complex, subunit epsilon
1798	Protein	NP_009194	COPE	coatomer protein complex, subunit epsilon
1799	DNA	NM_133476	ZNF384	zinc finger protein 384
1800	Protein	NP_597733	ZNF384	zinc finger protein 384
1801	DNA	NM_024056	MGC5576	hypothetical protein MGC5576
1802	Protein	NP_076961	MGC5576	hypothetical protein MGC5576
1803	DNA	NM_007373	SHOC2	soc-2 suppressor of clear homolog (C. elegans)
1804	Protein	NP_031399	SHOC2	soc-2 suppressor of clear homolog (C. elegans)
1805	DNA	NM_004762	PSCD1	pleckstrin homology, Sec7 and coiled/coil domains 1(cytohesin 1)
1806	Protein	NP_004753	PSCD1	pleckstrin homology, Sec7 and coiled/coil domains 1(cytohesin 1)
1807	DNA	NM_017456	PSCD1	pleckstrin homology, Sec7 and coiled/coil domains 1(cytohesin 1)

1808	Protein	NP_059430	PSCD1	pleckstrin homology, Sec7 and coiled/coil domains 1(cytohesin 1)
1809	DNA	NM_018847	KIAA1354	KIAA1354 protein
1810	Protein	NP_061335	KIAA1354	KIAA1354 protein
1811	DNA	NM_003093	SNRPC	small nuclear ribonucleoprotein polypeptide C
1812	Protein	NP_003084	SNRPC	small nuclear ribonucleoprotein polypeptide C
1813	DNA	NM_006948	STCH	stress 70 protein chaperone, microsome-associated, 60kDa
1814	Protein	NP_008879	STCH	stress 70 protein chaperone, microsome-associated, 60kDa
1815	DNA	M21259		Cluster Incl. M21259:Human Alu repeats in the region 5 to the small nuclear ribonucleoprotein E gene /cds=(0,278) /gb=M21259 /gi=338258 /ug=Hs.1066 /len=446
1816	DNA	NM_014306	HSPC117	hypothetical protein HSPC117
1817	Protein	NP_055121	HSPC117	hypothetical protein HSPC117
1818	DNA	NM_001261	CDK9	cyclin-dependent kinase 9 (CDC2-related kinase)
1819	Protein	NP_001252	CDK9	cyclin-dependent kinase 9 (CDC2-related kinase)
1820	DNA	NM_017443	POLE3	polymerase (DNA directed), epsilon 3 (p17 subunit)
1821	Protein	NP_059139	POLE3	polymerase (DNA directed), epsilon 3 (p17 subunit)
1822	DNA	AB014527	CLASP2	cytoplasmic linker associated protein 2
1823	Protein	AB014527 (Translation)	CLASP2	cytoplasmic linker associated protein 2
1824	DNA	NM_004599		Homo sapiens sterol regulatory element binding transcription factor 2 (SREBF2), mRNA
1825	Protein	NP_004590		Sterol regulatory element-binding transcription factor 2; sterol regulatory element-binding protein 2 [Homo sapiens]
1826	DNA	NM_013318	KIAA0515	KIAA0515 protein
1827	Protein	NP_037450	KIAA0515	KIAA0515 protein
1828	DNA	D86978	C7orf14	chromosome 7 open reading frame 14
1829	Protein	D86978 (Translation)	C7orf14	chromosome 7 open reading frame 14
1830	DNA	AB020671	KIAA0864	KIAA0864 protein
1831	Protein	AB020671 (Translation)	KIAA0864	KIAA0864 protein
1832	DNA	NM_144586	MGC29643	hypothetical protein MGC29643
1833	Protein	NP_653187	MGC29643	hypothetical protein MGC29643

1834	DNA	NM_007100	ATP5I	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit e
1835	Protein	NP_009031	ATP5I	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit e
1836	DNA	NM_003824	FADD	Fas (TNFRSF6)-associated via death domain
1837	Protein	NP_003815	FADD	Fas (TNFRSF6)-associated via death domain
1838	DNA	NM_014891	PDAP1	PDGFA associated protein 1
1839	Protein	NP_055706	PDAP1	PDGFA associated protein 1
1840	DNA	NM_007372	RNAHP	RNA helicase-related protein
1841	Protein	NP_031398	RNAHP	RNA helicase-related protein
1842	DNA	NM_014928		Cluster Incl. AB028969:Homo sapiens mRNA for KIAA1046 protein, complete cds /cds=(577,1782) /gb=AB028969 /gi=5689428 /ug=Hs.89519 /len=5577
1843	Protein	NP_055743		Cluster Incl. AB028969:Homo sapiens mRNA for KIAA1046 protein, complete cds /cds=(577,1782) /gb=AB028969 /gi=5689428 /ug=Hs.89519 /len=5577
1844	DNA	NM_005216	DDOST	dolichyl-diphosphooligosaccharide-protein glycosyltransferase
1845	Protein	NP_005207	DDOST	dolichyl-diphosphooligosaccharide-protein glycosyltransferase
1846	DNA	NM_014233	UBTF	upstream binding transcription factor, RNA polymerase I
1847	Protein	NP_055048	UBTF	upstream binding transcription factor, RNA polymerase I
1848	DNA	NM_003574	VAPA	VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa
1849	Protein	NP_003565	VAPA	VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa
1850	DNA	NM_006997	TACC2	transforming, acidic coiled-coil containing protein 2
1851	Protein	NP_008928	TACC2	transforming, acidic coiled-coil containing protein 2
1852	DNA	NM_018358	FLJ11198	hypothetical protein FLJ11198
1853	Protein	NP_060828	FLJ11198	hypothetical protein FLJ11198
1854	DNA	NM_005273		Homo sapiens guanine nucleotide binding protein (G protein), beta polypeptide 2 (GNB2), mRNA
1855	Protein	NP_005264		guanine nucleotide-binding protein, beta-2 subunit; G protein, beta-2 subunit

1856	Protein	NP_005264	GNB2	guanine nucleotide binding protein (G protein), beta polypeptide 2
1857	DNA	NM_007027	TOPBP1	topoisomerase (DNA) II binding protein
1858	Protein	NP_008958	TOPBP1	topoisomerase (DNA) II binding protein
1859	DNA	NM_005487	HMG2L1	high-mobility group protein 2-like 1
1860	Protein	NP_005478	HMG2L1	high-mobility group protein 2-like 1
1861	DNA	NM_014791	MELK	maternal embryonic leucine zipper kinase
1862	Protein	NP_055606	MELK	maternal embryonic leucine zipper kinase
1863	DNA	AB028992	KIAA1069	KIAA1069 protein
1864	Protein	AB028992 (Translation)	KIAA1069	KIAA1069 protein
1865	DNA	NM_003921	BCL10	B-cell CLL/lymphoma 10
1866	Protein	NP_003912	BCL10	B-cell CLL/lymphoma 10
1867	DNA	NM_004799	MADHIP	MAD, mothers against decapentaplegic homolog (Drosophila) interacting protein, receptor activation anchor
1868	Protein	NP_004790	MADHIP	MAD, mothers against decapentaplegic homolog (Drosophila) interacting protein, receptor activation anchor
1869	DNA	NM_007323	MADHIP	MAD, mothers against decapentaplegic homolog (Drosophila) interacting protein, receptor activation anchor
1870	Protein	NP_015562	MADHIP	MAD, mothers against decapentaplegic homolog (Drosophila) interacting protein, receptor activation anchor
1871	DNA	NM_002912	REV3L	REV3-like, catalytic subunit of DNA polymerase zeta (yeast)
1872	Protein	NP_002903	REV3L	REV3-like, catalytic subunit of DNA polymerase zeta (yeast)
1873	DNA	NM_005470	SSH3BP1	spectrin SH3 domain binding protein 1
1874	Protein	NP_005461	SSH3BP1	spectrin SH3 domain binding protein 1
1875	DNA	NM_005955	MTF1	metal-regulatory transcription factor 1
1876	Protein	NP_005946	MTF1	metal-regulatory transcription factor 1
1877	DNA	NM_004868	GPSN2	glycoprotein, synaptic 2
1878	Protein	NP_004859	GPSN2	glycoprotein, synaptic 2
1879	DNA	NM_138501	GPSN2	glycoprotein, synaptic 2
1880	Protein	NP_612510	GPSN2	glycoprotein, synaptic 2

1881	DNA	NM_007262	DJ-1	RNA-binding protein regulatory subunit
1882	Protein	NP_009193	DJ-1	RNA-binding protein regulatory subunit
1883	DNA	NM_006451	PAIP1	polyadenylate binding protein-interacting protein 1
1884	Protein	NP_006442	PAIP1	polyadenylate binding protein-interacting protein 1
1885	DNA	NM_002491	NDUFB3	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12kDa
1886	Protein	NP_002482	NDUFB3	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12kDa
1887	DNA	NM_007331	WHSC1	Wolf-Hirschhorn syndrome candidate 1
1888	Protein	NP_015627	WHSC1	Wolf-Hirschhorn syndrome candidate 1
1889	DNA	NM_014919	WHSC1	Wolf-Hirschhorn syndrome candidate 1
1890	Protein	NP_055734	WHSC1	Wolf-Hirschhorn syndrome candidate 1
1891	DNA	NM_133330	WHSC1	Wolf-Hirschhorn syndrome candidate 1
1892	Protein	NP_579877	WHSC1	Wolf-Hirschhorn syndrome candidate 1
1893	DNA	NM_133331	WHSC1	Wolf-Hirschhorn syndrome candidate 1
1894	DNA	U55980		Homo sapiens cDNA: FLJ23482 fis, clone KAIA03142, mRNA sequence
1895	DNA	AF037989		STAT-induced STAT inhibitor-2 [Homo sapiens], mRNA sequence
1896	Protein	AF037989 (Translation)		STAT-induced STAT inhibitor-2 [Homo sapiens], mRNA sequence
1897	DNA	X96924		Cluster Incl. X96924:H.sapiens gene encoding mitochondrial citrate transport protein /cds=(0,957) /gb=X96924 /gi=1770309 /ug=Hs.111024 /len=1522
1898	Protein	CAA65633		Cluster Incl. X96924:H.sapiens gene encoding mitochondrial citrate transport protein /cds=(0,957) /gb=X96924 /gi=1770309 /ug=Hs.111024 /len=1522
1899	DNA	NM_021079	NMT1	N-myristoyltransferase 1
1900	Protein	NP_066565	NMT1	N-myristoyltransferase 1
1901	DNA	AB018257	ZNF294	zinc finger protein 294
1902	Protein	AB018257 (Translation)	ZNF294	zinc finger protein 294
1903	DNA	NM_014463	LSM3	Lsm3 protein
1904	Protein	NP_055278	LSM3	Lsm3 protein
1905	DNA	NM_004436	ENSA	endosulfine alpha

1906	Protein	NP_004427	ENSA	endosulfine alpha
1907	DNA	NM_004528	MGST3	microsomal glutathione S-transferase 3
1908	Protein	NP_004519	MGST3	microsomal glutathione S-transferase 3
1909	DNA	NM_005387	NUP98	nucleoporin 98kDa
1910	Protein	NP_005378	NUP98	nucleoporin 98kDa
1911	DNA	NM_016320	NUP98	nucleoporin 98kDa
1912	Protein	NP_057404	NUP98	nucleoporin 98kDa
1913	DNA	NM_139131	NUP98	nucleoporin 98kDa
1914	Protein	NP_624357	NUP98	nucleoporin 98kDa
1915	DNA	NM_139132	NUP98	nucleoporin 98kDa
1916	Protein	NP_624358	NUP98	nucleoporin 98kDa
1917	DNA	NM_019059	TOM7	homolog of Tom7 (S. cerevisiae)
1918	Protein	NP_061932	TOM7	homolog of Tom7 (S. cerevisiae)
1919	DNA	NM_006423	RABAC1	Rab acceptor 1 (prenylated)
1920	Protein	NP_006414	RABAC1	Rab acceptor 1 (prenylated)
1921	DNA	NM_006022	TSC22	transforming growth factor beta-stimulated protein TSC-22
1922	Protein	NP_006013	TSC22	transforming growth factor beta-stimulated protein TSC-22
1923	DNA	NM_015902	DD5	progestin induced protein
1924	Protein	NP_056986	DD5	progestin induced protein
1925	DNA	NM_005935	MLLT2	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 2
1926	Protein	NP_005926	MLLT2	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 2
1927	DNA	Y00978		PDC-E2 precursor (AA -54 to 561) [Homo sapiens], mRNA sequence
1928	Protein	Y00978 (Translation)		PDC-E2 precursor (AA -54 to 561) [Homo sapiens], mRNA sequence
1929	DNA	NM_005720	ARPC1B	actin related protein 2/3 complex, subunit 1B, 41kDa
1930	Protein	NP_005711	ARPC1B	actin related protein 2/3 complex, subunit 1B, 41kDa
1931	DNA	NM_014706	SART3	squamous cell carcinoma antigen recognised by T cells 3
1932	Protein	NP_055521	SART3	squamous cell carcinoma antigen recognised by T cells 3
1933	DNA	NM_004698	HPRP3P	U4/U6-associated RNA splicing factor
1934	Protein	NP_004689	HPRP3P	U4/U6-associated RNA splicing factor
1935	DNA	NM_001360	DHCR7	7-dehydrocholesterol reductase
1936	Protein	NP_001351	DHCR7	7-dehydrocholesterol reductase
1937	DNA	NM_014623	MEA	male-enhanced antigen
1938	Protein	NP_055438	MEA	male-enhanced antigen
1939	DNA	U41843		Dr1-associated corepressor, mRNA sequence

1940	Protein	U41843 (Translation)		Dr1-associated corepressor, mRNA sequence
1941	DNA	NM_014299	BRD4	bromodomain containing 4
1942	Protein	NP_055114	BRD4	bromodomain containing 4
1943	DNA	NM_058243	BRD4	bromodomain containing 4
1944	Protein	NP_490597	BRD4	bromodomain containing 4
1945	DNA	NM_003103	SON	SON DNA binding protein
1946	Protein	NP_003094	SON	SON DNA binding protein
1947	DNA	NM_032195	SON	SON DNA binding protein
1948	Protein	NP_115571	SON	SON DNA binding protein
1949	DNA	NM_058183	SON	SON DNA binding protein
1950	Protein	NP_478063	SON	SON DNA binding protein
1951	DNA	NM_138925	SON	SON DNA binding protein
1952	Protein	NP_620303	SON	SON DNA binding protein
1953	DNA	NM_138926	SON	SON DNA binding protein
1954	Protein	NP_620304	SON	SON DNA binding protein
1955	DNA	NM_005392	PHF2	PHD finger protein 2
1956	Protein	NP_005383	PHF2	PHD finger protein 2
1957	DNA	NM_024517	PHF2	PHD finger protein 2
1958	Protein	NP_078793	PHF2	PHD finger protein 2
1959	DNA	NM_000175	GPI	glucose phosphate isomerase
1960	Protein	NP_000166	GPI	glucose phosphate isomerase
1961	DNA	NM_017751	FLJ20297	hypothetical protein FLJ20297
1962	Protein	NP_060221	FLJ20297	hypothetical protein FLJ20297
1963	DNA	NM_017951	FLJ20297	hypothetical protein FLJ20297
1964	Protein	NP_060421	FLJ20297	hypothetical protein FLJ20297
1965	DNA	AB018310	KIAA0767	KIAA0767 protein
1966	Protein	AB018310 (Translation)	KIAA0767	KIAA0767 protein
1967	DNA	NM_006097	MYL9	myosin, light polypeptide 9, regulatory
1968	Protein	NP_006088	MYL9	myosin, light polypeptide 9, regulatory
1969	DNA	NM_005973	PRCC	papillary renal cell carcinoma (translocation-associated)
1970	Protein	NP_005964	PRCC	papillary renal cell carcinoma (translocation-associated)
1971	DNA	NM_014372	RNF11	ring finger protein 11
1972	Protein	NP_055187	RNF11	ring finger protein 11
1973	DNA	NM_004645	COIL	coilin
1974	Protein	NP_004636	COIL	coilin
1975	DNA	NM_001235	SERPINH2	serine (or cysteine) proteinase inhibitor, clade H (heat shock protein 47), member 2
1976	Protein	NP_001226	SERPINH2	serine (or cysteine) proteinase inhibitor, clade H (heat shock protein 47), member 2
1977	DNA	NM_004729	ALTE	Ac-like transposable element
1978	Protein	NP_004720	ALTE	Ac-like transposable element
1979	DNA	NM_006201	PCTK1	PCTAIRE protein kinase 1
1980	Protein	NP_006192	PCTK1	PCTAIRE protein kinase 1
1981	DNA	NM_033018	PCTK1	PCTAIRE protein kinase 1
1982	DNA	NM_033019	PCTK1	PCTAIRE protein kinase 1
1983	Protein	NP_148979	PCTK1	PCTAIRE protein kinase 1
1984	DNA	NM_018074	FLJ10374	hypothetical protein FLJ10374
1985	Protein	NP_060544	FLJ10374	hypothetical protein FLJ10374

1986	DNA	NM_001270	CHD1	chromodomain helicase DNA binding protein 1
1987	Protein	NP_001261	CHD1	chromodomain helicase DNA binding protein 1
1988	DNA	NM_012191	FUS2	putative tumor suppressor
1989	Protein	NP_036323	FUS2	putative tumor suppressor
1990	DNA	NM_005862	STAG1	stromal antigen 1
1991	Protein	NP_005853	STAG1	stromal antigen 1
1992	Protein	NP_005393	RALA	v-ral simian leukemia viral oncogene homolog A (ras related)
1993	DNA	NM_007249	KLF12	Kruppel-like factor 12
1994	Protein	NP_009180	KLF12	Kruppel-like factor 12
1995	DNA	NM_016285	KLF12	Kruppel-like factor 12
1996	Protein	NP_057369	KLF12	Kruppel-like factor 12
1997	DNA	NM_013299	HSU79266	protein predicted by clone 23627
1998	Protein	NP_037431	HSU79266	protein predicted by clone 23627
1999	DNA	NM_002915	RFC3	replication factor C (activator 1) 3, 38kDa
2000	Protein	NP_002906	RFC3	replication factor C (activator 1) 3, 38kDa
2001	DNA	NM_012346	NUP62	nucleoporin 62kDa
2002	Protein	NP_036478	NUP62	nucleoporin 62kDa
2003	DNA	NM_016553	NUP62	nucleoporin 62kDa
2004	Protein	NP_057637	NUP62	nucleoporin 62kDa
2005	DNA	NM_153718	NUP62	nucleoporin 62kDa
2006	Protein	NP_714940	NUP62	nucleoporin 62kDa
2007	DNA	NM_153719	NUP62	nucleoporin 62kDa
2008	DNA	D64109	TOB2	transducer of ERBB2, 2
2009	Protein	D64109 (Translation)	TOB2	transducer of ERBB2, 2
2010	DNA	NM_001834	CLTB	clathrin, light polypeptide (Lcb)
2011	Protein	NP_001825	CLTB	clathrin, light polypeptide (Lcb)
2012	DNA	NM_007097	CLTB	clathrin, light polypeptide (Lcb)
2013	Protein	NP_009028	CLTB	clathrin, light polypeptide (Lcb)
2014	DNA	NM_018979	PRKWNK1	protein kinase, lysine deficient 1
2015	Protein	NP_061852	PRKWNK1	protein kinase, lysine deficient 1
2016	DNA	NM_019892	PPI5PIV	phosphatidylinositol (4,5) bisphosphate 5-phosphatase homolog; phosphatidylinositol polyphosphate 5-phosphatase type IV
2017	Protein	NP_063945	PPI5PIV	phosphatidylinositol (4,5) bisphosphate 5-phosphatase homolog; phosphatidylinositol polyphosphate 5-phosphatase type IV
2018	DNA	NM_004069	AP2S1	adaptor-related protein complex 2, sigma 1 subunit
2019	Protein	NP_004060	AP2S1	adaptor-related protein complex 2, sigma 1 subunit
2020	DNA	NM_021575	AP2S1	adaptor-related protein complex 2, sigma 1 subunit

2021	Protein	NP_067586	AP2S1	adaptor-related protein complex 2, sigma 1 subunit
2022	DNA	NM_016426	GTSE1	G-2 and S-phase expressed 1
2023	Protein	NP_057510	GTSE1	G-2 and S-phase expressed 1
2024	DNA	NM_152696	Nbak2	homeodomain interacting protein kinase 1-like protein
2025	Protein	NP_689909	Nbak2	homeodomain interacting protein kinase 1-like protein
2026	DNA	NM_032217	GTAR	gene trap ankyrin repeat
2027	Protein	NP_115593	GTAR	gene trap ankyrin repeat
2028	DNA	NM_015271	TRIM2	tripartite motif-containing 2
2029	Protein	NP_056086	TRIM2	tripartite motif-containing 2
2030	DNA	NM_021005	NR2F2	nuclear receptor subfamily 2, group F, member 2
2031	Protein	NP_066285	NR2F2	nuclear receptor subfamily 2, group F, member 2
2032	DNA	NM_015079	KIAA1055	KIAA1055 protein
2033	Protein	NP_055894	KIAA1055	KIAA1055 protein
2034	DNA	W28264		Unknown (protein for MGC:17296) [Homo sapiens], mRNA sequence
2035	DNA	NM_021645	KIAA0266	KIAA0266 gene product
2036	Protein	NP_067677	KIAA0266	KIAA0266 gene product
2037	DNA	AL080156	DKFZP434J214	DKFZP434J214 protein
2038	Protein	AL080156 (Translation)	DKFZP434J214	DKFZP434J214 protein
2039	DNA	NM_003449	TRIM26	tripartite motif-containing 26
2040	Protein	NP_003440	TRIM26	tripartite motif-containing 26
2041	DNA	NM_014604	TIP-1	Tax interaction protein 1
2042	Protein	NP_055419	TIP-1	Tax interaction protein 1
2043	DNA	NM_014570	ARFGAP3	ADP-ribosylation factor GTPase activating protein 3
2044	Protein	NP_055385	ARFGAP3	ADP-ribosylation factor GTPase activating protein 3
2045	DNA	NM_003605	OGT	O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine:polypeptide-N-acetylglucosaminyl transferase)
2046	Protein	NP_003596	OGT	O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine:polypeptide-N-acetylglucosaminyl transferase)
2047	DNA	NM_015898	FBI1	HIV-1 inducer of short transcripts binding protein; lymphoma related factor
2048	Protein	NP_056982	FBI1	HIV-1 inducer of short transcripts binding protein; lymphoma related factor
2049	DNA	NM_001564	ING1L	inhibitor of growth family, member 1-like
2050	Protein	NP_001555	ING1L	inhibitor of growth family, member 1-like
2051	DNA	NM_014292	CBX6	chromobox homolog 6
2052	Protein	NP_055107	CBX6	chromobox homolog 6

2053	DNA	NM_003663	CGGBP1	CGG triplet repeat binding protein 1
2054	Protein	NP_003654	CGGBP1	CGG triplet repeat binding protein 1
2055	DNA	NM_004329	BMPR1A	bone morphogenetic protein receptor, type IA
2056	Protein	NP_004320	BMPR1A	bone morphogenetic protein receptor, type IA
2057	DNA	NM_015464	DKFZp564D206	cystine-knot containing secreted protein
2058	Protein	NP_056279	DKFZp564D206	cystine-knot containing secreted protein
2059	DNA	AI557322		Homo sapiens cDNA: FLJ22256 fis, clone HRC02860, mRNA sequence
2060	DNA	AB007928	KIAA0459	KIAA0459 protein
2061	Protein	AB007928 (Translation)	KIAA0459	KIAA0459 protein
2062	DNA	NM_004251	RAB9A	RAB9A, member RAS oncogene family
2063	Protein	NP_004242	RAB9A	RAB9A, member RAS oncogene family
2064	DNA	NM_003223	TFAP4	transcription factor AP-4 (activating enhancer binding protein 4)
2065	Protein	NP_003214	TFAP4	transcription factor AP-4 (activating enhancer binding protein 4)
2066	DNA	NM_007215	POLG2	polymerase (DNA directed), gamma 2, accessory subunit
2067	Protein	NP_009146	POLG2	polymerase (DNA directed), gamma 2, accessory subunit
2068	DNA	NM_004312	ARR3	arrestin 3, retinal (X-arrestin)
2069	Protein	NP_004303	ARR3	arrestin 3, retinal (X-arrestin)
2070	DNA	NM_015569	KIAA0820	KIAA0820 protein
2071	Protein	NP_056384	KIAA0820	KIAA0820 protein
2072	DNA	NM_021140	UTX	ubiquitously transcribed tetratricopeptide repeat gene, X chromosome
2073	Protein	NP_066963	UTX	ubiquitously transcribed tetratricopeptide repeat gene, X chromosome
2074	DNA	NM_002131	HMGA1	high mobility group AT-hook 1
2075	Protein	NP_002122	HMGA1	high mobility group AT-hook 1
2076	DNA	NM_145899	HMGA1	high mobility group AT-hook 1
2077	Protein	NP_665906	HMGA1	high mobility group AT-hook 1
2078	DNA	NM_145901	HMGA1	high mobility group AT-hook 1
2079	DNA	NM_145902	HMGA1	high mobility group AT-hook 1
2080	DNA	NM_003009	SEPW1	selenoprotein W, 1
2081	Protein	NP_003000	SEPW1	selenoprotein W, 1
2082	DNA	NM_005979	S100A13	S100 calcium binding protein A13
2083	Protein	NP_005970	S100A13	S100 calcium binding protein A13
2084	DNA	NM_006618	PLU-1	putative DNA/chromatin binding motif

2085	Protein	NP_006609	PLU-1	putative DNA/chromatin binding motif
2086	DNA	NM_003592	CUL1	cullin 1
2087	Protein	NP_003583	CUL1	cullin 1
2088	DNA	NM_004902	RNPC2	RNA-binding region (RNP1, RRM) containing 2
2089	Protein	NP_004893	RNPC2	RNA-binding region (RNP1, RRM) containing 2
2090	DNA	NM_003584	DUSP11	dual specificity phosphatase 11 (RNA/RNP complex 1-interacting)
2091	Protein	NP_003575	DUSP11	dual specificity phosphatase 11 (RNA/RNP complex 1-interacting)
2092	DNA	NM_005809	PRDX2	peroxiredoxin 2
2093	Protein	NP_005800	PRDX2	peroxiredoxin 2
2094	DNA	NM_005157	ABL1	v-abl Abelson murine leukemia viral oncogene homolog 1
2095	Protein	NP_005148	ABL1	v-abl Abelson murine leukemia viral oncogene homolog 1
2096	DNA	NM_007313	ABL1	v-abl Abelson murine leukemia viral oncogene homolog 1
2097	Protein	NP_009297	ABL1	v-abl Abelson murine leukemia viral oncogene homolog 1
2098	DNA	NM_001356	DDX3	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 3
2099	Protein	NP_001347	DDX3	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 3
2100	DNA	NM_024005	DDX3	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 3
2101	DNA	NM_000938	POLR2B	polymerase (RNA) II (DNA directed) polypeptide B, 140kDa
2102	Protein	NP_000929	POLR2B	polymerase (RNA) II (DNA directed) polypeptide B, 140kDa
2103	DNA	NM_005080	XBP1	X-box binding protein 1
2104	Protein	NP_005071	XBP1	X-box binding protein 1
2105	DNA	AL031781	QKI	homolog of mouse quaking QKI (KH domain RNA binding protein)
2106	DNA	NM_005095	ZNF262	zinc finger protein 262
2107	Protein	NP_005086	ZNF262	zinc finger protein 262
2108	DNA	NM_014837	C1orf16	chromosome 1 open reading frame 16
2109	Protein	NP_055652	C1orf16	chromosome 1 open reading frame 16
2110	DNA	NM_015057	KIAA0916	KIAA0916 protein
2111	Protein	NP_055872	KIAA0916	KIAA0916 protein
2112	DNA	NM_004094	EIF2S1	eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa
2113	Protein	NP_004085	EIF2S1	eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa
2114	DNA	NM_001681	ATP2A2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2
2115	Protein	NP_001672	ATP2A2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2

2116	DNA	NM_170665	ATP2A2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2
2117	Protein	NP_733765	ATP2A2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2
2118	DNA	NM_015255	KIAA0349	KIAA0349 protein
2119	Protein	NP_056070	KIAA0349	KIAA0349 protein
2120	DNA	NM_001031	RPS28	ribosomal protein S28
2121	Protein	NP_001022	RPS28	ribosomal protein S28
2122	DNA	NM_006443	RCL	putative c-Myc-responsive
2123	Protein	NP_006434	RCL	putative c-Myc-responsive
2124	DNA	NM_000988	RPL27	ribosomal protein L27
2125	Protein	NP_000979	RPL27	ribosomal protein L27
2126	DNA	U93181	SBF1	SET binding factor 1
2127	Protein	U93181 (Translation)	SBF1	SET binding factor 1
2128	DNA	AC004877		Cluster Incl. AC004877:Homo sapiens PAC clone DJ0751H13 from 7q35-qter /cds=(0,1514) /gb=AC004877 /gi=3638954 /ug=Hs.112158 /len=1515
2129	Protein	AC004877 (Translation)		Cluster Incl. AC004877:Homo sapiens PAC clone DJ0751H13 from 7q35-qter /cds=(0,1514) /gb=AC004877 /gi=3638954 /ug=Hs.112158 /len=1515
2130	DNA	NM_003651	CSDA	cold shock domain protein A
2131	Protein	NP_003642	CSDA	cold shock domain protein A
2132	DNA	NM_004694	SLC16A6	solute carrier family 16 (monocarboxylic acid transporters), member 6
2133	Protein	NP_004685	SLC16A6	solute carrier family 16 (monocarboxylic acid transporters), member 6
2134	DNA	AB028986	USP22	ubiquitin specific protease 22
2135	Protein	AB028986 (Translation)	USP22	ubiquitin specific protease 22
2136	DNA	NM_003321	TUFM	Tu translation elongation factor, mitochondrial
2137	Protein	NP_003312	TUFM	Tu translation elongation factor, mitochondrial
2138	DNA	NM_014473	HSA9761	putative dimethyladenosine transferase
2139	Protein	NP_055288	HSA9761	putative dimethyladenosine transferase
2140	DNA	NM_014577		Cluster Incl. Z98885:Human DNA sequence from clone 522J7 on chromosome 22q13.3. Contains part of a 60S Ribosomal protein L5 pseudogene and a Peregrin (BR140) LIKE gene downstream of a putative CpG island. Contains ESTs, STSs and GSSs /cds=(185,3361) /gb=Z

2141	Protein	NP_055392		Cluster Incl. Z98885:Human DNA sequence from clone 522J7 on chromosome 22q13.3. Contains part of a 60S Ribosomal protein L5 pseudogene and a Peregrin (BR140) LIKE gene downstream of a putative CpG island. Contains ESTs, STSs and GSSs /cds=(185,3361) /gb=Z
2142	DNA	NM_133370	KIAA1966	KIAA1966 protein
2143	Protein	NP_588611	KIAA1966	KIAA1966 protein
2144	DNA	NM_015196	KIAA0922	KIAA0922 protein
2145	Protein	NP_056011	KIAA0922	KIAA0922 protein
2146	DNA	AI655015		Homo sapiens mRNA; cDNA DKFZp586F2224 (from clone DKFZp586F2224), mRNA sequence
2147	DNA	NM_006190	ORC2L	origin recognition complex, subunit 2-like (yeast)
2148	Protein	NP_006181	ORC2L	origin recognition complex, subunit 2-like (yeast)
2149	DNA	NM_005227	EFNA4	ephrin-A4
2150	Protein	NP_005218	EFNA4	ephrin-A4
2151	DNA	NM_006714	ASM3A	acid sphingomyelinase-like phosphodiesterase
2152	Protein	NP_006705	ASM3A	acid sphingomyelinase-like phosphodiesterase
2153	DNA	AF150247		HSPC060 [Homo sapiens], mRNA sequence
2154	DNA	NM_003542	H4FG	H4 histone family, member G
2155	Protein	NP_003533	H4FG	H4 histone family, member G
2156	DNA	NM_006020	ALKBH	alkB, alkylation repair homolog (E. coli)
2157	Protein	NP_006011	ALKBH	alkB, alkylation repair homolog (E. coli)
2158	DNA	NM_014777	KIAA0133	KIAA0133 gene product
2159	Protein	NP_055592	KIAA0133	KIAA0133 gene product
2160	DNA	NM_006101	HEC	highly expressed in cancer, rich in leucine heptad repeats
2161	Protein	NP_006092	HEC	highly expressed in cancer, rich in leucine heptad repeats
2162	DNA	NM_005785	SBB103	hypothetical SBBI03 protein
2163	Protein	NP_005776	SBB103	hypothetical SBBI03 protein
2164	DNA	NM_014676	PUM1	pumilio homolog 1 (Drosophila)
2165	Protein	NP_055491	PUM1	pumilio homolog 1 (Drosophila)
2166	DNA	NM_002657	PLAGL2	pleiomorphic adenoma gene-like 2
2167	Protein	NP_002648	PLAGL2	pleiomorphic adenoma gene-like 2
2168	DNA	NM_005831	NDP52	nuclear domain 10 protein
2169	Protein	NP_005822	NDP52	nuclear domain 10 protein
2170	DNA	NM_003174	SVIL	supervillin
2171	Protein	NP_003165	SVIL	supervillin

2172	DNA	NM_021738	SVIL	supervillin
2173	Protein	NP_068506	SVIL	supervillin
2174	DNA	NM_005676	RBM10	RNA binding motif protein 10
2175	Protein	NP_005667	RBM10	RNA binding motif protein 10
2176	DNA	NM_152856	RBM10	RNA binding motif protein 10
2177	Protein	NP_690595	RBM10	RNA binding motif protein 10
2178	DNA	NM_015046	KIAA0625	KIAA0625 protein
2179	Protein	NP_055861	KIAA0625	KIAA0625 protein
2180	DNA	D87450	KIAA0261	KIAA0261 protein
2181	Protein	D87450 (Translation)	KIAA0261	KIAA0261 protein
2182	DNA	NM_003489	NRIP1	nuclear receptor interacting protein 1
2183	Protein	NP_003480	NRIP1	nuclear receptor interacting protein 1
2184	DNA	NM_017528	WBSCR22	Williams Beuren syndrome chromosome region 22
2185	Protein	NP_059998	WBSCR22	Williams Beuren syndrome chromosome region 22
2186	DNA	NM_006795	EHD1	EH-domain containing 1
2187	Protein	NP_006786	EHD1	EH-domain containing 1
2188	DNA	NM_006374	STK25	serine/threonine kinase 25 (STE20 homolog, yeast)
2189	Protein	NP_006365	STK25	serine/threonine kinase 25 (STE20 homolog, yeast)
2190	DNA	NM_007040	E1B-AP5	E1B-55kDa-associated protein 5
2191	Protein	NP_008971	E1B-AP5	E1B-55kDa-associated protein 5
2192	DNA	NM_144732	E1B-AP5	E1B-55kDa-associated protein 5
2193	Protein	NP_653333	E1B-AP5	E1B-55kDa-associated protein 5
2194	DNA	NM_144733	E1B-AP5	E1B-55kDa-associated protein 5
2195	Protein	NP_653334	E1B-AP5	E1B-55kDa-associated protein 5
2196	DNA	NM_144734	E1B-AP5	E1B-55kDa-associated protein 5
2197	Protein	NP_653335	E1B-AP5	E1B-55kDa-associated protein 5
2198	DNA	NM_017715	ZNF3	zinc finger protein 3 (A8-51)
2199	Protein	NP_060185	ZNF3	zinc finger protein 3 (A8-51)
2200	DNA	NM_032924	ZNF3	zinc finger protein 3 (A8-51)
2201	Protein	NP_116313	ZNF3	zinc finger protein 3 (A8-51)
2202	DNA	NM_006371	CRTAP	cartilage associated protein
2203	Protein	NP_006362	CRTAP	cartilage associated protein
2204	DNA	NM_006372	NSAP1	NS1-associated protein 1
2205	Protein	NP_006363	NSAP1	NS1-associated protein 1
2206	DNA	NM_014666	ENTH	enthoprotin
2207	Protein	NP_055481	ENTH	enthoprotin
2208	DNA	NM_004889	ATP5J2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
2209	Protein	NP_004880	ATP5J2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2

2210	DNA	NM_005667	ZFP103	zinc finger protein 103 homolog (mouse)
2211	Protein	NP_005658	ZFP103	zinc finger protein 103 homolog (mouse)
2212	DNA	NM_014661	KIAA0140	KIAA0140 gene product
2213	Protein	NP_055476	KIAA0140	KIAA0140 gene product
2214	DNA	NM_015646	RAP1B	RAP1B, member of RAS oncogene family
2215	Protein	NP_056461	RAP1B	RAP1B, member of RAS oncogene family
2216	DNA	NM_172020	POM121	POM121 membrane glycoprotein (rat)
2217	Protein	NP_742017	POM121	POM121 membrane glycoprotein (rat)
2218	DNA	NM_012083	FRAT2	frequently rearranged in advanced T-cell lymphomas 2
2219	Protein	NP_036215	FRAT2	frequently rearranged in advanced T-cell lymphomas 2
2220	DNA	NM_144635	MGC21688	hypothetical protein MGC21688
2221	Protein	NP_653236	MGC21688	hypothetical protein MGC21688
2222	DNA	NM_006510	RFP	ret finger protein
2223	Protein	NP_006501	RFP	ret finger protein
2224	DNA	NM_030950	RFP	ret finger protein
2225	Protein	NP_112212	RFP	ret finger protein
2226	DNA	AI761647		Homo sapiens cDNA FLJ36527 fis, clone TRACH2003941, mRNA sequence
2227	DNA	NM_002105	H2AFX	H2A histone family, member X
2228	Protein	NP_002096	H2AFX	H2A histone family, member X
2229	DNA	NM_005801	SUI1	putative translation initiation factor
2230	Protein	NP_005792	SUI1	putative translation initiation factor
2231	DNA	R37702		ESTs
2232	DNA	NM_003358	UGCG	UDP-glucose ceramide glucosyltransferase
2233	Protein	NP_003349	UGCG	UDP-glucose ceramide glucosyltransferase
2234	DNA	NM_006460	HIS1	HMBA-inducible
2235	Protein	NP_006451	HIS1	HMBA-inducible
2236	DNA	NM_018380	DDX28	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 28
2237	Protein	NP_060850	DDX28	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 28
2238	DNA	NM_001895	CSNK2A1	casein kinase 2, alpha 1 polypeptide
2239	Protein	NP_001886	CSNK2A1	casein kinase 2, alpha 1 polypeptide
2240	DNA	NM_003675	PRPF18	PRP18 pre-mRNA processing factor 18 homolog (yeast)
2241	Protein	NP_003666	PRPF18	PRP18 pre-mRNA processing factor 18 homolog (yeast)
2242	DNA	NM_001352	DBP	D site of albumin promoter (albumin D-box) binding protein

2243	Protein	NP_001343	DBP	D site of albumin promoter (albumin D-box) binding protein
2244	DNA	NM_020126	DBP	D site of albumin promoter (albumin D-box) binding protein
2245	Protein	NP_064511	DBP	D site of albumin promoter (albumin D-box) binding protein
2246	DNA	NM_004404	NEDD5	neural precursor cell expressed, developmentally down-regulated 5
2247	Protein	NP_004395	NEDD5	neural precursor cell expressed, developmentally down-regulated 5
2248	DNA	NM_002533	NVL	nuclear VCP-like
2249	Protein	NP_002524	NVL	nuclear VCP-like
2250	DNA	AI830496	KIAA1240	KIAA1240 protein
2251	DNA	NM_000474	TWIST	twist homolog (acrocephalosyndactyly 3; Saethre-Chotzen syndrome) (Drosophila)
2252	Protein	NP_000465	TWIST	twist homolog (acrocephalosyndactyly 3; Saethre-Chotzen syndrome) (Drosophila)
2253	DNA	NM_007346	OGFR	opioid growth factor receptor
2254	Protein	NP_031372	OGFR	opioid growth factor receptor
2255	DNA	NM_001202	BMP4	bone morphogenetic protein 4
2256	Protein	NP_001193	BMP4	bone morphogenetic protein 4
2257	DNA	NM_130850	BMP4	bone morphogenetic protein 4
2258	DNA	NM_130851	BMP4	bone morphogenetic protein 4
2259	DNA	NM_015421	DKFZP564K2062	DKFZP564K2062 protein
2260	Protein	NP_056236	DKFZP564K2062	DKFZP564K2062 protein
2261	DNA	NM_005924	MEOX2	mesenchyme homeo box 2 (growth arrest-specific homeo box)
2262	Protein	NP_005915	MEOX2	mesenchyme homeo box 2 (growth arrest-specific homeo box)
2263	DNA	NM_014071	NCOA6	nuclear receptor coactivator 6
2264	Protein	NP_054790	NCOA6	nuclear receptor coactivator 6
2265	DNA	NM_015252	KIAA0903	KIAA0903 protein
2266	Protein	NP_056067	KIAA0903	KIAA0903 protein
2267	DNA	NM_001707	BCL7B	B-cell CLL/lymphoma 7B
2268	Protein	NP_001698	BCL7B	B-cell CLL/lymphoma 7B
2269	DNA	NM_138707	BCL7B	B-cell CLL/lymphoma 7B
2270	Protein	NP_619713	BCL7B	B-cell CLL/lymphoma 7B
2271	DNA	NM_015251	KIAA0431	KIAA0431 protein
2272	Protein	NP_056066	KIAA0431	KIAA0431 protein
2273	DNA	NM_015497	DKFZP564G2022	DKFZP564G2022 protein
2274	Protein	NP_056312	DKFZP564G2022	DKFZP564G2022 protein

2275	DNA	NM_002480	PPP1R12A	protein phosphatase 1, regulatory (inhibitor) subunit 12A
2276	Protein	NP_002471	PPP1R12A	protein phosphatase 1, regulatory (inhibitor) subunit 12A
2277	DNA	NM_004514	ILF1	interleukin enhancer binding factor 1
2278	Protein	NP_004505	ILF1	interleukin enhancer binding factor 1
2279	DNA	AB020633	KIAA0826	KIAA0826 protein
2280	Protein	AB020633 (Translation)	KIAA0826	KIAA0826 protein
2281	DNA	NM_020465	NDRG4	NDRG family member 4
2282	Protein	NP_065198	NDRG4	NDRG family member 4
2283	DNA	NM_022910	NDRG4	NDRG family member 4
2284	DNA	NM_015966	SDBCAG84	serologically defined breast cancer antigen 84
2285	Protein	NP_057050	SDBCAG84	serologically defined breast cancer antigen 84
2286	DNA	NM_007198	PROSC	proline synthetase co-transcribed homolog (bacterial)
2287	Protein	NP_009129	PROSC	proline synthetase co-transcribed homolog (bacterial)
2288	DNA	NM_004935	CDK5	cyclin-dependent kinase 5
2289	Protein	NP_004926	CDK5	cyclin-dependent kinase 5
2290	DNA	AL049987		Homo sapiens mRNA; cDNA DKFZp564F112 (from clone DKFZp564F112), mRNA sequence
2291	DNA	NM_005994	TBX2	T-box 2
2292	Protein	NP_005985	TBX2	T-box 2
2293	DNA	AL050007	DKFZP564A043	DKFZP564A043 protein
2294	Protein	AL050007 (Translation)	DKFZP564A043	DKFZP564A043 protein
2295	DNA	NM_007172	NUP50	nucleoporin 50kDa
2296	Protein	NP_009103	NUP50	nucleoporin 50kDa
2297	DNA	NM_153645	NUP50	nucleoporin 50kDa
2298	Protein	NP_705931	NUP50	nucleoporin 50kDa
2299	DNA	NM_153684	NUP50	nucleoporin 50kDa
2300	DNA	NM_002824	PTMS	parathymosin
2301	Protein	NP_002815	PTMS	parathymosin
2302	DNA	AF052178		Homo sapiens clone 24523 mRNA sequence
2303	DNA	NM_003583	DYRK2	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 2
2304	Protein	NP_003574	DYRK2	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 2
2305	DNA	NM_006482	DYRK2	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 2
2306	Protein	NP_006473	DYRK2	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 2

2307	DNA	AI475497	HELSNF1	helicase with SNF2 domain 1
2308	DNA	NM_016107	ZFR	zinc finger RNA binding protein
2309	Protein	NP_057191	ZFR	zinc finger RNA binding protein
2310	DNA	NM_025137	FLJ21439	hypothetical protein FLJ21439
2311	Protein	NP_079413	FLJ21439	hypothetical protein FLJ21439
2312	DNA	NM_017736	FLJ20274	hypothetical protein FLJ20274
2313	Protein	NP_060206	FLJ20274	hypothetical protein FLJ20274
2314	DNA	NM_017548	H41	hypothetical protein H41
2315	Protein	NP_060018	H41	hypothetical protein H41
2316	DNA	NM_005749	TOB1	transducer of ERBB2, 1
2317	Protein	NP_005740	TOB1	transducer of ERBB2, 1
2318	DNA	NM_005803	FLOT1	flotillin 1
2319	Protein	NP_005794	FLOT1	flotillin 1
2320	DNA	NM_005138	SCO2	SCO cytochrome oxidase deficient homolog 2 (yeast)
2321	Protein	NP_005129	SCO2	SCO cytochrome oxidase deficient homolog 2 (yeast)
2322	DNA	AI312646		Homo sapiens mRNA; cDNA DKFZp564H1916 (from clone DKFZp564H1916), mRNA sequence
2323	DNA	NM_003937	KYNU	kynureninase (L-kynurenine hydrolase)
2324	Protein	NP_003928	KYNU	kynureninase (L-kynurenine hydrolase)
2325	DNA	NM_001827	CKS2	CDC28 protein kinase regulatory subunit 2
2326	Protein	NP_001818	CKS2	CDC28 protein kinase regulatory subunit 2
2327	DNA	NM_016324	ZNF274	zinc finger protein 274
2328	Protein	NP_057408	ZNF274	zinc finger protein 274
2329	DNA	NM_016325	ZNF274	zinc finger protein 274
2330	Protein	NP_057409	ZNF274	zinc finger protein 274
2331	DNA	NM_133502	ZNF274	zinc finger protein 274
2332	Protein	NP_598009	ZNF274	zinc finger protein 274
2333	DNA	NM_004523	KNSL1	kinesin-like 1
2334	Protein	NP_004514	KNSL1	kinesin-like 1
2335	DNA	NM_014885	APC10	anaphase-promoting complex subunit 10
2336	Protein	NP_055700	APC10	anaphase-promoting complex subunit 10
2337	DNA	NM_002519	NPAT	nuclear protein, ataxia-telangiectasia locus
2338	Protein	NP_002510	NPAT	nuclear protein, ataxia-telangiectasia locus
2339	DNA	NM_002449	MSX2	msh homeo box homolog 2 (Drosophila)
2340	Protein	NP_002440	MSX2	msh homeo box homolog 2 (Drosophila)
2341	DNA	NM_002398	MEIS1	Meis1, myeloid ecotropic viral integration site 1 homolog (mouse)
2342	Protein	NP_002389	MEIS1	Meis1, myeloid ecotropic viral integration site 1 homolog (mouse)

2343	DNA	NM_005085	NUP214	nucleoporin 214kDa
2344	Protein	NP_005076	NUP214	nucleoporin 214kDa
2345	DNA	NM_153642	NUP214	nucleoporin 214kDa
2346	Protein	NP_705906	NUP214	nucleoporin 214kDa
2347	DNA	NM_004493	HADH2	hydroxyacyl-Coenzyme A dehydrogenase, type II
2348	Protein	NP_004484	HADH2	hydroxyacyl-Coenzyme A dehydrogenase, type II
2349	DNA	NM_001329	CTBP2	C-terminal binding protein 2
2350	Protein	NP_001320	CTBP2	C-terminal binding protein 2
2351	DNA	NM_022802	CTBP2	C-terminal binding protein 2
2352	Protein	NP_073713	CTBP2	C-terminal binding protein 2
2353	DNA	NM_133264	WIRE	WIRE protein
2354	Protein	NP_573571	WIRE	WIRE protein
2355	DNA	NM_000937	POLR2A	polymerase (RNA) II (DNA directed) polypeptide A, 220kDa
2356	Protein	NP_000928	POLR2A	polymerase (RNA) II (DNA directed) polypeptide A, 220kDa
2357	DNA	AA643063	DKFZP434C212	DKFZP434C212 protein
2358	DNA	NM_001275	CHGA	chromogranin A (parathyroid secretory protein 1)
2359	Protein	NP_001266	CHGA	chromogranin A (parathyroid secretory protein 1)
2360	DNA	NM_015555	COASTER	coactivator for steroid receptors
2361	Protein	NP_056370	COASTER	coactivator for steroid receptors
2362	DNA	NM_015874	KBF2	H-2K binding factor-2
2363	Protein	NP_056958	KBF2	H-2K binding factor-2
2364	DNA	NM_000687	AHCY	S-adenosylhomocysteine hydrolase
2365	Protein	NP_000678	AHCY	S-adenosylhomocysteine hydrolase
2366	DNA	NM_002376	MARK3	MAP/microtubule affinity-regulating kinase 3
2367	Protein	NP_002367	MARK3	MAP/microtubule affinity-regulating kinase 3
2368	DNA	NM_003899	ARHGEF7	Rho guanine nucleotide exchange factor (GEF) 7
2369	Protein	NP_003890	ARHGEF7	Rho guanine nucleotide exchange factor (GEF) 7
2370	DNA	NM_145735	ARHGEF7	Rho guanine nucleotide exchange factor (GEF) 7
2371	Protein	NP_663788	ARHGEF7	Rho guanine nucleotide exchange factor (GEF) 7
2372	DNA	NM_015634	DKFZP586B0923	DKFZP586B0923 protein
2373	Protein	NP_056449	DKFZP586B0923	DKFZP586B0923 protein
2374	DNA	AB011102	ZNF292	zinc finger protein 292
2375	Protein	AB011102 (Translation)	ZNF292	zinc finger protein 292
2376	DNA	NM_024824	FLJ11806	hypothetical protein FLJ11806
2377	Protein	NP_079100	FLJ11806	hypothetical protein FLJ11806
2378	DNA	NM_001823	CKB	creatine kinase, brain
2379	Protein	NP_001814	CKB	creatine kinase, brain

2380	DNA	NM_003211	TDG	thymine-DNA glycosylase
2381	Protein	NP_003202	TDG	thymine-DNA glycosylase
2382	DNA	NM_003634	NIPSNAP1	nipsnap homolog 1 (C. elegans)
2383	Protein	NP_003625	NIPSNAP1	nipsnap homolog 1 (C. elegans)
2384	DNA	NM_014225	PPP2R1A	protein phosphatase 2 (formerly 2A), regulatory subunit A (PR 65), alpha isoform
2385	Protein	NP_055040	PPP2R1A	protein phosphatase 2 (formerly 2A), regulatory subunit A (PR 65), alpha isoform
2386	DNA	T57872		EST, Moderately similar to COXG_HUMAN Cytochrome c oxidase polypeptide VIb (AED) [H.sapiens]
2387	DNA	NM_003792	EDF1	endothelial differentiation-related factor 1
2388	Protein	NP_003783	EDF1	endothelial differentiation-related factor 1
2389	DNA	NM_153200	EDF1	endothelial differentiation-related factor 1
2390	Protein	NP_694880	EDF1	endothelial differentiation-related factor 1
2391	DNA	NM_004332	BPHL	biphenyl hydrolase-like (serine hydrolase; breast epithelial mucin-associated antigen)
2392	Protein	NP_004323	BPHL	biphenyl hydrolase-like (serine hydrolase; breast epithelial mucin-associated antigen)
2393	DNA	AA290994		Homo sapiens cDNA FLJ20722 fis, clone HEP15411, mRNA sequence
2394	DNA	AA554945		ESTs, Weakly similar to hypothetical protein FLJ20378 [Homo sapiens] [H.sapiens]
2395	DNA	NM_015626	WSB1	SOCS box-containing WD protein SWiP-1
2396	Protein	NP_056441	WSB1	SOCS box-containing WD protein SWiP-1
2397	DNA	NM_134264	WSB1	SOCS box-containing WD protein SWiP-1
2398	Protein	NP_599026	WSB1	SOCS box-containing WD protein SWiP-1
2399	DNA	NM_134265	WSB1	SOCS box-containing WD protein SWiP-1
2400	Protein	NP_599027	WSB1	SOCS box-containing WD protein SWiP-1
2401	DNA	NM_030980	FLJ12671	hypothetical protein FLJ12671
2402	Protein	NP_112242	FLJ12671	hypothetical protein FLJ12671
2403	DNA	NM_017432	PTOV1	prostate tumor over expressed gene 1
2404	Protein	NP_059128	PTOV1	prostate tumor over expressed gene 1
2405	DNA	W26477	HELSNF1	helicase with SNF2 domain 1
2406	DNA	NM_003864	SAP30	sin3-associated polypeptide, 30kDa
2407	Protein	NP_003855	SAP30	sin3-associated polypeptide, 30kDa

2408	DNA	L36531	ITGA8	integrin, alpha 8
2409	Protein	L36531 (Translation)	ITGA8	integrin, alpha 8
2410	DNA	NM_004272	SYN47	Homer, neuronal immediate early gene, 1B
2411	Protein	NP_004263	SYN47	Homer, neuronal immediate early gene, 1B
2412	DNA	NM_003213	TEAD4	TEA domain family member 4
2413	Protein	NP_003204	TEAD4	TEA domain family member 4
2414	DNA	NM_024112	C9orf16	chromosome 9 open reading frame 16
2415	Protein	NP_077017	C9orf16	chromosome 9 open reading frame 16
2416	DNA	NM_005544	IRS1	insulin receptor substrate 1
2417	Protein	NP_005535	IRS1	insulin receptor substrate 1
2418	DNA	NM_006951	TAF5	TAF5 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 100kDa
2419	Protein	NP_008882	TAF5	TAF5 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 100kDa
2420	DNA	NM_139052	TAF5	TAF5 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 100kDa
2421	Protein	NP_620640	TAF5	TAF5 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 100kDa
2422	DNA	NM_002692	POLE2	polymerase (DNA directed), epsilon 2 (p59 subunit)
2423	Protein	NP_002683	POLE2	polymerase (DNA directed), epsilon 2 (p59 subunit)
2424	DNA	NM_004459	FALZ	fetal Alzheimer antigen
2425	Protein	NP_004450	FALZ	fetal Alzheimer antigen
2426	DNA	NM_004634	BRPF1	bromodomain and PHD finger containing, 1
2427	Protein	NP_004625	BRPF1	bromodomain and PHD finger containing, 1
2428	DNA	NM_003624	RANBP3	RAN binding protein 3
2429	Protein	NP_003615	RANBP3	RAN binding protein 3
2430	DNA	NM_007320	RANBP3	RAN binding protein 3
2431	Protein	NP_015559	RANBP3	RAN binding protein 3
2432	DNA	NM_007321	RANBP3	RAN binding protein 3
2433	Protein	NP_015560	RANBP3	RAN binding protein 3
2434	DNA	NM_007322	RANBP3	RAN binding protein 3
2435	Protein	NP_015561	RANBP3	RAN binding protein 3
2436	DNA	NM_014902	KIAA0964	KIAA0964 protein
2437	Protein	NP_055717	KIAA0964	KIAA0964 protein
2438	DNA	NM_002414	MIC2	antigen identified by monoclonal antibodies 12E7, F21 and O13
2439	Protein	NP_002405	MIC2	antigen identified by monoclonal antibodies 12E7, F21 and O13

2440	DNA	NM_005534	IFNGR2	interferon gamma receptor 2 (interferon gamma transducer 1)
2441	Protein	NP_005525	IFNGR2	interferon gamma receptor 2 (interferon gamma transducer 1)
2442	DNA	NM_014827	KIAA0663	KIAA0663 gene product
2443	Protein	NP_055642	KIAA0663	KIAA0663 gene product
2444	DNA	NM_005054	RANBP2L1	RAN binding protein 2-like 1
2445	Protein	NP_005045	RANBP2L1	RAN binding protein 2-like 1
2446	DNA	NM_032260	RANBP2L1	RAN binding protein 2-like 1
2447	Protein	NP_115636	RANBP2L1	RAN binding protein 2-like 1
2448	DNA	NM_000975	RPL11	ribosomal protein L11
2449	Protein	NP_000966	RPL11	ribosomal protein L11
2450	DNA	NM_005730	OS4	conserved gene amplified in osteosarcoma
2451	Protein	NP_005721	OS4	conserved gene amplified in osteosarcoma
2452	DNA	NM_000462	UBE3A	ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome)
2453	Protein	NP_000453	UBE3A	ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome)
2454	DNA	NM_130838	UBE3A	ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome)
2455	Protein	NP_570853	UBE3A	ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome)
2456	DNA	NM_130839	UBE3A	ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome)
2457	Protein	NP_570854	UBE3A	ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome)
2458	DNA	NM_004373	COX6A1	cytochrome c oxidase subunit VIa polypeptide 1
2459	Protein	NP_004364	COX6A1	cytochrome c oxidase subunit VIa polypeptide 1
2460	DNA	NM_022170	WBSCR1	Williams-Beuren syndrome chromosome region 1
2461	Protein	NP_071496	WBSCR1	Williams-Beuren syndrome chromosome region 1
2462	DNA	NM_031992	WBSCR1	Williams-Beuren syndrome chromosome region 1
2463	Protein	NP_114381	WBSCR1	Williams-Beuren syndrome chromosome region 1
2464	DNA	NM_002574	PRDX1	peroxiredoxin 1
2465	Protein	NP_002565	PRDX1	peroxiredoxin 1

2466	DNA	NM_002166	ID2	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein
2467	Protein	NP_002157	ID2	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein
2468	DNA	NM_002629	PGAM1	phosphoglycerate mutase 1 (brain)
2469	Protein	NP_002620	PGAM1	phosphoglycerate mutase 1 (brain)
2470	DNA	NM_004090	DUSP3	dual specificity phosphatase 3 (vaccinia virus phosphatase VH1-related)
2471	Protein	NP_004081	DUSP3	dual specificity phosphatase 3 (vaccinia virus phosphatase VH1-related)
2472	DNA	AI222594		Homo sapiens mRNA; cDNA DKFZp564H1916 (from clone DKFZp564H1916), mRNA sequence
2473	DNA	NM_013298	HSU79252	hypothetical protein HSU79252
2474	Protein	NP_037430	HSU79252	hypothetical protein HSU79252
2475	DNA	AB007916	KIAA0447	KIAA0447 gene product
2476	Protein	AB007916 (Translation)	KIAA0447	KIAA0447 gene product
2477	DNA	NM_006303	JTV1	JTV1 gene
2478	Protein	NP_006294	JTV1	JTV1 gene
2479	DNA	NM_004773	TRIP3	thyroid hormone receptor interactor 3
2480	Protein	NP_004764	TRIP3	thyroid hormone receptor interactor 3
2481	DNA	NM_016391	HSPC111	hypothetical protein HSPC111
2482	Protein	NP_057475	HSPC111	hypothetical protein HSPC111
2483	DNA	AL046940		ESTs, Weakly similar to hypothetical protein FLJ22184 [Homo sapiens] [H.sapiens]
2484	DNA	NM_020151	STARD7	START domain containing 7
2485	Protein	NP_064536	STARD7	START domain containing 7
2486	DNA	NM_139267	STARD7	START domain containing 7
2487	DNA	NM_005234	NR2F6	nuclear receptor subfamily 2, group F, member 6
2488	Protein	NP_005225	NR2F6	nuclear receptor subfamily 2, group F, member 6
2489	DNA	NM_002967	SAFB	scaffold attachment factor B
2490	Protein	NP_002958	SAFB	scaffold attachment factor B
2491	DNA	NM_018186	PACE-1	ezrin-binding partner PACE-1
2492	Protein	NP_060656	PACE-1	ezrin-binding partner PACE-1
2493	DNA	NM_020423	PACE-1	ezrin-binding partner PACE-1
2494	Protein	NP_065156	PACE-1	ezrin-binding partner PACE-1
2495	DNA	NM_001130	AES	amino-terminal enhancer of split
2496	Protein	NP_001121	AES	amino-terminal enhancer of split
2497	DNA	NM_005859	PURA	purine-rich element binding protein A
2498	Protein	NP_005850	PURA	purine-rich element binding protein A

2499	DNA	NM_003032	SIAT1	sialyltransferase 1 (beta-galactoside alpha-2,6-sialytransferase)
2500	Protein	NP_003023	SIAT1	sialyltransferase 1 (beta-galactoside alpha-2,6-sialytransferase)
2501	DNA	NM_173216	SIAT1	sialyltransferase 1 (beta-galactoside alpha-2,6-sialytransferase)
2502	DNA	NM_173217	SIAT1	sialyltransferase 1 (beta-galactoside alpha-2,6-sialytransferase)
2503	Protein	NP_775324	SIAT1	sialyltransferase 1 (beta-galactoside alpha-2,6-sialytransferase)
2504	DNA	NM_003952	RPS6KB2	ribosomal protein S6 kinase, 70kDa, polypeptide 2
2505	Protein	NP_003943	RPS6KB2	ribosomal protein S6 kinase, 70kDa, polypeptide 2
2506	DNA	NM_015110	SMC5	SMC5 protein
2507	Protein	NP_055925	SMC5	SMC5 protein
2508	DNA	NM_007152	ZNF195	zinc finger protein 195
2509	Protein	NP_009083	ZNF195	zinc finger protein 195
2510	DNA	NM_003171	SUPV3L1	suppressor of var1, 3-like 1 (S. cerevisiae)
2511	Protein	NP_003162	SUPV3L1	suppressor of var1, 3-like 1 (S. cerevisiae)
2512	DNA	NM_012265	C22orf3	chromosome 22 open reading frame 3
2513	Protein	NP_036397	C22orf3	chromosome 22 open reading frame 3
2514	DNA	NM_004053	BYSL	bystin-like
2515	Protein	NP_004044	BYSL	bystin-like
2516	DNA	NM_014921	LEC2	lectomedin-2
2517	Protein	NP_055736	LEC2	lectomedin-2
2518	DNA	NM_015285	WDR7	WD repeat domain 7
2519	Protein	NP_056100	WDR7	WD repeat domain 7
2520	DNA	NM_052834	WDR7	WD repeat domain 7
2521	Protein	NP_443066	WDR7	WD repeat domain 7
2522	DNA	AB014554	PPFIA3	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 3
2523	Protein	AB014554 (Translation)	PPFIA3	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 3
2524	DNA	NM_003453	ZNF198	zinc finger protein 198
2525	Protein	NP_003444	ZNF198	zinc finger protein 198
2526	DNA	NM_005043	MAP2K7	mitogen-activated protein kinase kinase 7
2527	Protein	NP_005034	MAP2K7	mitogen-activated protein kinase kinase 7
2528	DNA	NM_145185	MAP2K7	mitogen-activated protein kinase kinase 7
2529	Protein	NP_660186	MAP2K7	mitogen-activated protein kinase kinase 7

2530	DNA	NM_145329	MAP2K7	mitogen-activated protein kinase kinase 7
2531	Protein	NP_663302	MAP2K7	mitogen-activated protein kinase kinase 7
2532	DNA	NM_014918	CHSY1	carbohydrate (chondroitin) synthase 1
2533	Protein	NP_055733	CHSY1	carbohydrate (chondroitin) synthase 1
2534	DNA	AB007883	KIAA0423	KIAA0423 protein
2535	Protein	AB007883 (Translation)	KIAA0423	KIAA0423 protein
2536	DNA	NM_004520	KIF2	kinesin heavy chain member 2
2537	Protein	NP_004511	KIF2	kinesin heavy chain member 2
2538	DNA	NM_021212	ZF	HCF-binding transcription factor Zhangfei
2539	Protein	NP_067035	ZF	HCF-binding transcription factor Zhangfei
2540	DNA	NM_005360	MAF	v-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)
2541	Protein	NP_005351	MAF	v-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)
2542	DNA	NM_003668	MAPKAPK5	mitogen-activated protein kinase-activated protein kinase 5
2543	Protein	NP_003659	MAPKAPK5	mitogen-activated protein kinase-activated protein kinase 5
2544	DNA	NM_139078	MAPKAPK5	mitogen-activated protein kinase-activated protein kinase 5
2545	Protein	NP_620777	MAPKAPK5	mitogen-activated protein kinase-activated protein kinase 5
2546	DNA	NM_002405	MFNG	manic fringe homolog (Drosophila)
2547	Protein	NP_002396	MFNG	manic fringe homolog (Drosophila)
2548	DNA	NM_006339	HMG20B	high-mobility group 20B
2549	Protein	NP_006330	HMG20B	high-mobility group 20B
2550	DNA	W72239		Homo sapiens mRNA; cDNA DKFZp434M162 (from clone DKFZp434M162), mRNA sequence
2551	DNA	NM_000835	GRIN2C	glutamate receptor, ionotropic, N-methyl D-aspartate 2C
2552	Protein	NP_000826	GRIN2C	glutamate receptor, ionotropic, N-methyl D-aspartate 2C
2553	DNA	NM_006007	ZNF216	zinc finger protein 216
2554	Protein	NP_005998	ZNF216	zinc finger protein 216
2555	DNA	NM_004725	BUB3	BUB3 budding uninhibited by benzimidazoles 3 homolog (yeast)
2556	Protein	NP_004716	BUB3	BUB3 budding uninhibited by benzimidazoles 3 homolog (yeast)

2557	DNA	NM_015360	KIAA0052	KIAA0052 protein
2558	Protein	NP_056175	KIAA0052	KIAA0052 protein
2559	DNA	NM_005180	BMI1	B lymphoma Mo-MLV insertion region (mouse)
2560	Protein	NP_005171	BMI1	B lymphoma Mo-MLV insertion region (mouse)
2561	DNA	NM_015190	DNAJC9	DnaJ (Hsp40) homolog, subfamily C, member 9
2562	Protein	NP_056005	DNAJC9	DnaJ (Hsp40) homolog, subfamily C, member 9
2563	DNA	X68560	SP3	Sp3 transcription factor
2564	Protein	X68560 (Translation)	SP3	Sp3 transcription factor
2565	DNA	NM_004111	FEN1	flap structure-specific endonuclease 1
2566	Protein	NP_004102	FEN1	flap structure-specific endonuclease 1
2567	DNA	NM_016030	CGI-87	CGI-87 protein
2568	Protein	NP_057114	CGI-87	CGI-87 protein
2569	DNA	AB023164	KIAA0947	KIAA0947 protein
2570	Protein	AB023164 (Translation)	KIAA0947	KIAA0947 protein
2571	DNA	NM_001949	E2F3	E2F transcription factor 3
2572	Protein	NP_001940	E2F3	E2F transcription factor 3
2573	DNA	D87445	KIAA0256	KIAA0256 gene product
2574	Protein	D87445 (Translation)	KIAA0256	KIAA0256 gene product
2575	DNA	NM_015342	KIAA0073	KIAA0073 protein
2576	Protein	NP_056157	KIAA0073	KIAA0073 protein
2577	DNA	NM_018416	FHX	FOXJ2 forkhead factor
2578	Protein	NP_060886	FHX	FOXJ2 forkhead factor
2579	DNA	AB028956	KIAA1033	KIAA1033 protein
2580	Protein	AB028956 (Translation)	KIAA1033	KIAA1033 protein
2581	DNA	NM_004808	NMT2	N-myristoyltransferase 2
2582	Protein	NP_004799	NMT2	N-myristoyltransferase 2
2583	DNA	NM_000455	STK11	serine/threonine kinase 11 (Peutz-Jeghers syndrome)
2584	Protein	NP_000446	STK11	serine/threonine kinase 11 (Peutz-Jeghers syndrome)
2585	DNA	D83776	KIAA0191	KIAA0191 protein
2586	Protein	D83776 (Translation)	KIAA0191	KIAA0191 protein
2587	DNA	AF007128		Homo sapiens clone 23870 mRNA sequence
2588	DNA	AB018337	KIAA0794	KIAA0794 protein
2589	Protein	AB018337 (Translation)	KIAA0794	KIAA0794 protein
2590	DNA	NM_024051	MGC3077	hypothetical protein MGC3077
2591	Protein	NP_076956	MGC3077	hypothetical protein MGC3077
2592	DNA	NM_002646	PIK3C2B	phosphoinositide-3-kinase, class 2, beta polypeptide
2593	Protein	NP_002637	PIK3C2B	phosphoinositide-3-kinase, class 2, beta polypeptide
2594	DNA	NM_005745	BCAP31	accessory protein BAP31
2595	Protein	NP_005736	BCAP31	accessory protein BAP31
2596	DNA	NM_001319	CSNK1G2	casein kinase 1, gamma 2
2597	Protein	NP_001310	CSNK1G2	casein kinase 1, gamma 2

2598	DNA	NM_005744	ARIH1	ariadne homolog, ubiquitin-conjugating enzyme E2 binding protein, 1 (Drosophila)
2599	Protein	NP_005735	ARIH1	ariadne homolog, ubiquitin-conjugating enzyme E2 binding protein, 1 (Drosophila)
2600	DNA	NM_005839	SRRM1	serine/arginine repetitive matrix 1
2601	Protein	NP_005830	SRRM1	serine/arginine repetitive matrix 1
2602	DNA	NM_004342	CALD1	caldesmon 1
2603	Protein	NP_004333	CALD1	caldesmon 1
2604	DNA	NM_033138	CALD1	caldesmon 1
2605	Protein	NP_149129	CALD1	caldesmon 1
2606	DNA	NM_033139	CALD1	caldesmon 1
2607	Protein	NP_149130	CALD1	caldesmon 1
2608	DNA	NM_033140	CALD1	caldesmon 1
2609	Protein	NP_149131	CALD1	caldesmon 1
2610	DNA	NM_033157	CALD1	caldesmon 1
2611	Protein	NP_149347	CALD1	caldesmon 1
2612	DNA	NM_021034	IFITM3	interferon induced transmembrane protein 3 (1-8U)
2613	Protein	NP_066362	IFITM3	interferon induced transmembrane protein 3 (1-8U)
2614	DNA	NM_014900	KIAA0977	KIAA0977 protein
2615	Protein	NP_055715	KIAA0977	KIAA0977 protein
2616	DNA	NM_001865		Cluster Incl. AA978033:oq55e04.s1 Homo sapiens cDNA, 3' end /clone=IMAGE-1590270 /clone_end=3' /gb=AA978033 /gi=3155479 /ug=Hs.182684 /len=524
2617	Protein	NP_001856		Cluster Incl. AA978033:oq55e04.s1 Homo sapiens cDNA, 3' end /clone=IMAGE-1590270 /clone_end=3' /gb=AA978033 /gi=3155479 /ug=Hs.182684 /len=524
2618	DNA	NM_003252	TIAL1	TIA1 cytotoxic granule-associated RNA binding protein-like 1
2619	Protein	NP_003243	TIAL1	TIA1 cytotoxic granule-associated RNA binding protein-like 1
2620	DNA	NM_022333	TIAL1	TIA1 cytotoxic granule-associated RNA binding protein-like 1
2621	Protein	NP_071728	TIAL1	TIA1 cytotoxic granule-associated RNA binding protein-like 1
2622	DNA	NM_007209	RPL35	ribosomal protein L35
2623	Protein	NP_009140	RPL35	ribosomal protein L35

2624	DNA	NM_004045	ATOX1	ATX1 antioxidant protein 1 homolog (yeast)
2625	Protein	NP_004036	ATOX1	ATX1 antioxidant protein 1 homolog (yeast)
2626	DNA	NM_001418	EIF4G2	eukaryotic translation initiation factor 4 gamma, 2
2627	Protein	NP_001409	EIF4G2	eukaryotic translation initiation factor 4 gamma, 2
2628	DNA	NM_000352	ABCC8	ATP-binding cassette, sub-family C (CFTR/MRP), member 8
2629	Protein	NP_000343	ABCC8	ATP-binding cassette, sub-family C (CFTR/MRP), member 8
2630	DNA	NM_006153	NCK1	NCK adaptor protein 1
2631	Protein	NP_006144	NCK1	NCK adaptor protein 1
2632	DNA	NM_002417	MKI67	antigen identified by monoclonal antibody Ki-67
2633	Protein	NP_002408	MKI67	antigen identified by monoclonal antibody Ki-67
2634	DNA	AL040137		ESTs
2635	DNA	NM_021145	DMTF1	cyclin D binding myb-like transcription factor 1
2636	Protein	NP_066968	DMTF1	cyclin D binding myb-like transcription factor 1
2637	DNA	NM_004602	STAU	staufen, RNA binding protein (Drosophila)
2638	Protein	NP_004593	STAU	staufen, RNA binding protein (Drosophila)
2639	DNA	NM_017452	STAU	staufen, RNA binding protein (Drosophila)
2640	DNA	NM_017453	STAU	staufen, RNA binding protein (Drosophila)
2641	Protein	NP_059347	STAU	staufen, RNA binding protein (Drosophila)
2642	DNA	NM_017454	STAU	staufen, RNA binding protein (Drosophila)
2643	DNA	NM_016001	CGI-48	CGI-48 protein
2644	Protein	NP_057085	CGI-48	CGI-48 protein
2645	DNA	AF052138		Homo sapiens clone 23718 mRNA sequence
2646	DNA	NM_002767	PRPSAP2	phosphoribosyl pyrophosphate synthetase-associated protein 2
2647	Protein	NP_002758	PRPSAP2	phosphoribosyl pyrophosphate synthetase-associated protein 2
2648	DNA	NM_015658	DKFZP564C186	DKFZP564C186 protein
2649	Protein	NP_056473	DKFZP564C186	DKFZP564C186 protein
2650	DNA	D29954	KIAA0056	KIAA0056 protein
2651	Protein	D29954 (Translation)	KIAA0056	KIAA0056 protein
2652	DNA	NM_000529	MC2R	melanocortin 2 receptor (adrenocorticotropic hormone)
2653	Protein	NP_000520	MC2R	melanocortin 2 receptor (adrenocorticotropic hormone)
2654	DNA	NM_002382	MAX	MAX protein
2655	Protein	NP_002373	MAX	MAX protein

2656	DNA	NM_145112	MAX	MAX protein
2657	Protein	NP_660087	MAX	MAX protein
2658	DNA	NM_145113	MAX	MAX protein
2659	DNA	NM_145114	MAX	MAX protein
2660	Protein	NP_660089	MAX	MAX protein
2661	DNA	NM_145116	MAX	MAX protein
2662	Protein	NP_660092	MAX	MAX protein
2663	DNA	NM_005532	IFI27	interferon, alpha-inducible protein 27
2664	Protein	NP_005523	IFI27	interferon, alpha-inducible protein 27
2665	DNA	NM_000244	MEN1	multiple endocrine neoplasia I
2666	Protein	NP_000235	MEN1	multiple endocrine neoplasia I
2667	DNA	NM_130799	MEN1	multiple endocrine neoplasia I
2668	Protein	NP_570711	MEN1	multiple endocrine neoplasia I
2669	DNA	NM_130800	MEN1	multiple endocrine neoplasia I
2670	DNA	NM_130801	MEN1	multiple endocrine neoplasia I
2671	DNA	NM_130802	MEN1	multiple endocrine neoplasia I
2672	DNA	NM_130803	MEN1	multiple endocrine neoplasia I
2673	DNA	NM_130804	MEN1	multiple endocrine neoplasia I
2674	DNA	NM_004964		Histone deacetylase HD1, mRNA sequence
2675	Protein	NP_004955		Histone deacetylase HD1, mRNA sequence
2676	DNA	BA-13885		Histone deacetylase HD1, mRNA sequence
2677	DNA	NM_003743	NCOA1	nuclear receptor coactivator 1
2678	Protein	NP_003734	NCOA1	nuclear receptor coactivator 1
2679	DNA	NM_147223	NCOA1	nuclear receptor coactivator 1
2680	Protein	NP_671756	NCOA1	nuclear receptor coactivator 1
2681	DNA	NM_147233	NCOA1	nuclear receptor coactivator 1
2682	Protein	NP_671766	NCOA1	nuclear receptor coactivator 1
2683	DNA	NM_001893		Casein kinase I delta, mRNA sequence
2684	Protein	NP_001884		Casein kinase I delta, mRNA sequence
2685	DNA	NM_007065	CDC37	CDC37 cell division cycle 37 homolog (S. cerevisiae)
2686	Protein	NP_008996	CDC37	CDC37 cell division cycle 37 homolog (S. cerevisiae)
2687	DNA	NM_000534	PMS1	PMS1 postmeiotic segregation increased 1 (S. cerevisiae)
2688	Protein	NP_000525	PMS1	PMS1 postmeiotic segregation increased 1 (S. cerevisiae)
2689	DNA	NM_000535	PMS2	PMS2 postmeiotic segregation increased 2 (S. cerevisiae)
2690	Protein	NP_000526	PMS2	PMS2 postmeiotic segregation increased 2 (S. cerevisiae)
2691	DNA	NM_001809	CENPA	centromere protein A, 17kDa
2692	Protein	NP_001800	CENPA	centromere protein A, 17kDa
2693	DNA	NM_004419	DUSP5	dual specificity phosphatase 5
2694	Protein	NP_004410	DUSP5	dual specificity phosphatase 5
2695	DNA	NM_002887	RARS	arginyl-tRNA synthetase
2696	Protein	NP_002878	RARS	arginyl-tRNA synthetase
2697	DNA	NM_005521	TLX1	T-cell leukemia, homeobox 1
2698	Protein	NP_005512	TLX1	T-cell leukemia, homeobox 1

2699	DNA	NM_003318	TTK	TTK protein kinase
2700	Protein	NP_003309	TTK	TTK protein kinase
2701	DNA	NM_001291	CLK2	CDC-like kinase 2
2702	Protein	NP_001282	CLK2	CDC-like kinase 2
2703	DNA	NM_003993	CLK2	CDC-like kinase 2
2704	Protein	NP_003984	CLK2	CDC-like kinase 2
2705	DNA	HG3635-HT3845		Zinc Finger Protein, Kruppel-Like
2706	DNA	HG1322-HT5143		Small Nuclear Ribonucleoprotein, Polypeptide C, Alt. Splice 2
2707	DNA	HG1751-HT1768		Chorionic Somatomammotropin Hormone Cs-5
2708	DNA	NM_004341	CAD	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
2709	Protein	NP_004332	CAD	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
2710	DNA	NM_006145	DNAJB1	DnaJ (Hsp40) homolog, subfmaily B, member 1
2711	Protein	NP_006136	DNAJB1	DnaJ (Hsp40) homolog, subfmaily B, member 1
2712	DNA	NM_004039	ANXA2	annexin A2
2713	Protein	NP_004030	ANXA2	annexin A2
2714	DNA	NM_002643	PIGF	phosphatidylinositol glycan, class F
2715	Protein	NP_002634	PIGF	phosphatidylinositol glycan, class F
2716	DNA	NM_173074	PIGF	phosphatidylinositol glycan, class F
2717	Protein	NP_775097	PIGF	phosphatidylinositol glycan, class F
2718	DNA	NM_006468	RPC62	polymerase (RNA) III (DNA directed) (62kD)
2719	Protein	NP_006459	RPC62	polymerase (RNA) III (DNA directed) (62kD)
2720	DNA	NM_003220	TFAP2A	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)
2721	Protein	NP_003211	TFAP2A	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)
2722	DNA	NM_000946	PRIM1	primase, polypeptide 1, 49kDa
2723	Protein	NP_000937	PRIM1	primase, polypeptide 1, 49kDa
2724	DNA	NM_003913	PRPF4B	PRP4 pre-mRNA processing factor 4 homolog B (yeast)
2725	Protein	NP_003904	PRPF4B	PRP4 pre-mRNA processing factor 4 homolog B (yeast)
2726	DNA	NM_000956	PTGER2	prostaglandin E receptor 2 (subtype EP2), 53kDa
2727	Protein	NP_000947	PTGER2	prostaglandin E receptor 2 (subtype EP2), 53kDa

2728	DNA	NM_004398	DDX10	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 10 (RNA helicase)
2729	Protein	NP_004389	DDX10	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 10 (RNA helicase)
2730	DNA	NM_003345	UBE2I	ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast)
2731	Protein	NP_003336	UBE2I	ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast)
2732	DNA	NM_003463	PTP4A1	protein tyrosine phosphatase type IVA, member 1
2733	Protein	NP_003454	PTP4A1	protein tyrosine phosphatase type IVA, member 1
2734	DNA	NM_006164	NFE2L2	nuclear factor (erythroid-derived 2)-like 2
2735	Protein	NP_006155	NFE2L2	nuclear factor (erythroid-derived 2)-like 2
2736	DNA	NM_006284	TAF10	TAF10 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 30kDa
2737	Protein	NP_006275	TAF10	TAF10 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 30kDa
2738	DNA	NM_000801	FKBP1A	FK506 binding protein 1A, 12kDa
2739	Protein	NP_000792	FKBP1A	FK506 binding protein 1A, 12kDa
2740	DNA	NM_054014	FKBP1A	FK506 binding protein 1A, 12kDa
2741	DNA	NM_003403	YY1	YY1 transcription factor
2742	Protein	NP_003394	YY1	YY1 transcription factor
2743	DNA	NM_002415	MIF	macrophage migration inhibitory factor (glycosylation-inhibiting factor)
2744	Protein	NP_002406	MIF	macrophage migration inhibitory factor (glycosylation-inhibiting factor)
2745	DNA	NM_000296	PKD1	polycystic kidney disease 1 (autosomal dominant)
2746	Protein	NP_000287	PKD1	polycystic kidney disease 1 (autosomal dominant)
2747	DNA	NM_006243	PPP2R5A	protein phosphatase 2, regulatory subunit B (B56), alpha isoform
2748	Protein	NP_006234	PPP2R5A	protein phosphatase 2, regulatory subunit B (B56), alpha isoform
2749	DNA	NM_014235	UBL4	ubiquitin-like 4
2750	Protein	NP_055050	UBL4	ubiquitin-like 4
2751	DNA	NM_004156	PPP2CB	protein phosphatase 2 (formerly 2A), catalytic subunit, beta isoform
2752	Protein	NP_004147	PPP2CB	protein phosphatase 2 (formerly 2A), catalytic subunit, beta isoform

2753	DNA	NM_006332	IFI30	interferon, gamma-inducible protein 30
2754	Protein	NP_006323	IFI30	interferon, gamma-inducible protein 30
2755	DNA	NM_002811	PSMD7	proteasome (prosome, macropain) 26S subunit, non-ATPase, 7 (Mov34 homolog)
2756	Protein	NP_002802	PSMD7	proteasome (prosome, macropain) 26S subunit, non-ATPase, 7 (Mov34 homolog)
2757	DNA	NM_002806	PSMC6	proteasome (prosome, macropain) 26S subunit, ATPase, 6
2758	Protein	NP_002797	PSMC6	proteasome (prosome, macropain) 26S subunit, ATPase, 6
2759	DNA	NM_003262	TLOC1	translocation protein 1
2760	Protein	NP_003253	TLOC1	translocation protein 1
2761	DNA	NM_004954	MARK2	MAP/microtubule affinity-regulating kinase 2
2762	Protein	NP_004945	MARK2	MAP/microtubule affinity-regulating kinase 2
2763	DNA	NM_017490	MARK2	MAP/microtubule affinity-regulating kinase 2
2764	Protein	NP_059672	MARK2	MAP/microtubule affinity-regulating kinase 2
2765	DNA	NM_014264	STK18	serine/threonine kinase 18
2766	Protein	NP_055079	STK18	serine/threonine kinase 18
2767	DNA	NM_002969	MAPK12	mitogen-activated protein kinase 12
2768	Protein	NP_002960	MAPK12	mitogen-activated protein kinase 12
2769	DNA	K03022	U2 small nuclear RNA	U2 small nuclear RNA gene
2770	DNA	AK027091	FLJ23438 fis, clone HRC13275	FLJ23438 fis, clone HRC13275
2771	DNA	AL833005	cDNA DKFZp666D074	cDNA DKFZp666D074
2772	DNA	BC003629	clone MGC:2854 IMAGE:2987935	clone MGC:2854 IMAGE:2987935
2773	DNA	L37793	small nuclear RNA (U2) gene	small nuclear RNA (U2) gene
2774	DNA	U57614	U2 snRNA (RNU2) gene	U2 snRNA (RNU2) gene

Analogs of the biomarkers provided in Table 1 are also within the scope of the invention. Analogs can differ from the naturally occurring biomarker in nucleotide or amino acid sequence or in ways that do not involve sequence, or both. Non-sequence

modifications include in vivo or in vitro chemical derivitization. Non-sequence modifications also include changes in acetylation, methylation, phosphorylation, carboxylation, or glycosylation.

Preferred analogs of the biomarkers provided in Table 1 (or biologically active fragments thereof) include those whose sequences differ from the wild-type sequences by one or more conservative amino acid substitutions or by one or more non-conservative amino acid substitutions, deletions, or insertions which do not abolish biological activity. Conservative substitutions typically include, for example, the substitution of one amino acid for another with similar characteristics, e.g., substitutions within the following groups: valine, glycine; glycine, alanine; valine, isoleucine, leucine; aspartic acid, glutamic acid; asparagine, glutamine; serine, threonine; lysine, arginine; and phenylalanine, tyrosine.

The biomarkers of the invention include any biological molecule that can be detected and quantified in a biological sample using standard biochemical assay methods, where the presence and/or quantity of the biomarker in the biological sample: (i) can be used to select an appropriate treatment; or (ii) can be used to monitor the efficacy and progress of treatment with a cdk modulating agent.

In one aspect, the invention includes the biomarker provided in SEQ ID NO:1246 and assigned GenBank Accession No. W28729. It has been discovered that this biomarker has an expression pattern that correlates with inhibition of cdk in cells upon treatment with a cdk modulating agent. The biomarker of SEQ ID NO:1246 was discovered to have the most consistent and robust regulation in response to cdk inhibition.

The invention also includes specialized microarrays, e.g., oligonucleotide microarrays or cDNA microarrays, comprising one or more biomarkers.

The invention also includes kits comprising a suitable container that comprises: one or more microarrays that comprise one or more biomarkers; one or more cdk modulating agents for use in testing cells from patient tissue specimens or patient samples; and instructions for use. In addition, kits contemplated by the invention can further include, for example, reagents or materials for monitoring the expression of biomarkers of the invention at the level of mRNA or protein, using other techniques and systems practiced in the art such as, for example, RT-PCR

assays, which employ primers designed on the basis of one or more of the biomarkers described herein, immunoassays, such as enzyme linked immunosorbent assays (ELISAs), immunoblotting, e.g., Western blots, or *in situ* hybridization, and the like, as further described herein.

The invention also includes antibodies, including polyclonal or monoclonal, directed against one or more of the biomarker polypeptides. Such antibodies can be used in a variety of ways, for example, to purify, detect, and target the biomarker polypeptides of the invention, including both *in vitro* and *in vivo* diagnostic, detection, screening, and/or therapeutic methods.

In carrying out any of the methods of the invention, the levels of either a single biomarker or a set of two or more different biomarkers can be assayed. Assay of more than one biomarker may serve to increase the accuracy of monitoring the response of the patient to treatment with the cdk modulating agent, such as the extent of cdk2 inhibition. Measurement of a plurality of biomarkers can be carried out by assaying the different biomarkers in either the same biological sample or in different biological samples taken from the same patient.

In one aspect, the invention provides a method to monitor the response of a patient being treated for a disorder by administration of a cdk modulating agent, comprising: (a) determining the amount of at least one biomarker in a first biological sample taken from the patient prior to an initial treatment with the agent; (b) determining the amount of the biomarker in at least a second biological sample from the patient subsequent to the initial treatment with the agent; and (c) comparing the amount of the biomarker present in the second biological sample with the amount of the biomarker present in the first biological sample; such that a detectable change in the amount of the biomarker in the second biological sample, and/or in any subsequent biological samples, compared to the amount of biomarker present in the first biological sample indicates that the patient is responding positively to the treatment with the agent. The detectable change can be a decrease or an increase in the amount of the biomarker in the second biological sample, and/or in any subsequent biological samples.

This method requires that at least two biological samples are taken from the patient at different time points. The first sample is typically obtained prior to an

initial treatment with the cdk modulating agent. A second sample is then obtained, and any subsequent samples are also then obtained, after treatment with the cdk modulating agent has begun. In this method, the biomarker is monitored to determine: (i) if the amount of the biomarker is decreasing, (ii) if the rate of decrease in the amount of the biomarker is increasing, (iii) if the amount of the biomarker is increasing, (iv) if the rate of increase in the amount of the biomarker is increasing, or (v) if the amount of biomarker is stabilizing, any one of which may indicate that the patient is responding positively to the treatment depending upon the specific circumstances.

The biomarkers described herein may be upregulated or downregulated following treatment with one or more cdk modulating agents.

When the biomarker is an upregulated biomarker, it is expected that the amount of the biomarker will increase following treatment with the cdk modulating agent, i.e., that there will be a detectable increase in the amount of the biomarker in the second biological sample (post administration of the cdk modulating agent) compared to the amount of biomarker in the first biological sample (prior to administration of the cdk modulating agent). If the biomarker is an upregulated biomarker and the level of the biomarker has not increased a predetermined or detectable amount, or if the rate of increase of the biomarker level is not sufficiently high, the treatment can be modified, such as by increasing the dosage or the number of treatments, or by changing the cdk modulating agent being administered to a more effective agent, or by combining the cdk modulating agent being used in the treatment with one or more other cdk modulating agents or therapies, or some combination thereof.

When the biomarker is a downregulated biomarker, it is expected that the amount of the biomarker will decrease following treatment with the cdk modulating agent, i.e., that there will be a detectable decrease in the amount of the biomarker in the second biological sample (post administration of the cdk modulating agent) compared to the amount of biomarker in the first biological sample (prior to administration of the cdk modulating agent). If the biomarker is a downregulated biomarker and the level of the biomarker has not decreased a predetermined or detectable amount, or if the rate of decrease of the biomarker level is not sufficiently

high, the treatment can be modified, such as by increasing the dosage or the number of treatments, or by changing the cdk modulating agent being administered to a more effective agent, or by combining the cdk modulating agent being used in the treatment with one or more other cdk modulating agents or therapies, or some combination thereof.

The invention further provides an improvement to a method for treating a patient suffering from a disorder by administration of a cdk modulating agent, wherein the improvement comprises monitoring the level of at least one biomarker in a biological sample taken from the patient at one or more time points during treatment with the agent so as to determine whether an effective amount of the agent is being administered to the patient. An effective amount of the agent is being administered to the patient if the level of a downregulated biomarker in the biological sample detectably decreases, or if a previously observed rate of decrease in the level of the biomarker increases, in response to administration of the agent. In addition, an effective amount of the agent is being administered to the patient if the level of an upregulated biomarker in the biological sample detectably increases, or if a previously observed rate of increase in the level of the biomarker increases, in response to administration of the agent.

The invention further provides an improvement to a method for treating a patient suffering from a disorder by administration of a cdk modulating agent, wherein the improvement comprises monitoring the level of at least one biomarker in a biological sample taken from the patient at one or more time points during treatment with the agent so as to determine when a sufficient time course of treatment with the agent has been completed. In one embodiment, a sufficient time course of treatment with the agent has been completed when the level of a downregulated biomarker detectably decreases below a predetermined level. In another embodiment, a sufficient time course of treatment with the agent has been completed when the level of an upregulated biomarker detectably increases above a predetermined level.

The type of biological sample from which the amount of biomarker is determined will depend on a variety of factors such as the particular biomarker, where and when it is synthesized, where the biomarker may be stored in the tissues, and into what biological tissue or fluid it may be released or otherwise accumulate. Generally,

the biological sample will be selected from the group consisting of blood, a blood component such as serum or plasma, cerebrospinal fluid (CSF), saliva, and urine. In one aspect, the biological sample will be blood, serum, plasma, or CSF, and most preferably blood, serum, or plasma. Where more than one biomarker is analyzed, the analysis can be conducted on the same or different biological samples obtained from the patient.

The amount of the biomarker in a biological sample can be determined using standard techniques known in the art. For example, each biomarker can be assayed using biomarker-specific antibodies and immunological methods known in the art. Any appropriate immunoassay method can be used, including radioimmunoassays, sandwich enzyme-linked immunoassays, competitive binding assays, homogeneous assays, and heterogeneous assays. Alternatively, the amount of biomarker can be determined using other techniques such as magnetic resonance spectroscopy, HPLC, or mass spectrometry. In any case, the assay method selected should be sensitive enough to be able to measure the particular biomarker in a concentration range from normal values found in healthy patients to elevated levels indicating neurological damage. The assay can be carried out in various formats including, e.g., in a microtiter plate format, using automated immunoassay analyzers known in the art.

As used herein, the predetermined level of the biomarker in the biological sample refers to that amount or concentration of the particular biomarker in a biological sample wherein the amount of the biomarker is higher (upregulated biomarkers) or lower (downregulated biomarkers) statistically than that determined to be present in a biological sample obtained from the patient absent the treatment with the cdk modulating agent. The predetermined level depends upon the particular biomarker.

The expression level of the biomarker provides information about the patient's likely response to treatment with a cdk modulating agent. For this purpose, it is often desirable to correct for (normalize away) both differences in the amount of RNA assayed and variability in the quality of the RNA used. Therefore, the assay typically measures and incorporates the expression of certain normalizing genes, including well known housekeeping genes, such as GAPDH and CYPL. Alternatively, or in addition, normalization can be based on the mean or median signal (Ct in the case of

RT-PCR) of all of the assayed genes or a large subset thereof (global normalization approach). On a gene-by-gene basis, measured normalized amount of a patient tumor mRNA is compared to the amount found in a reference set of cancer tissue of the same type. The number (N) of cancer tissues in this reference set should be sufficiently high to ensure that different reference sets (as a whole) behave essentially the same way. If this condition is met, the identity of the individual cancer tissues present in a particular set will have no significant impact on the relative amounts of the genes assayed. The cancer tissue reference set can, in one aspect, consist of at least about 30 different cancer tissue specimens.

While the data described herein were generated in cell lines that are routinely used to screen and identify compounds that have potential utility for cancer therapy, the biomarkers may have both diagnostic and prognostic value in other diseases areas in which cdk or pathways in which cdk is involved is of importance, e.g., in immunology, or in cancers or tumors in which cell signaling and/or proliferation controls have gone awry.

Those having skill in the pertinent art will appreciate that cdk and pathways in which cdk is involved are used and functional in cell types other than cell lines of ovarian carcinoma cells and peripheral blood mononuclear cells. Therefore, the biomarkers and biomarker sets of the invention may show utility in cells from other tissues or organs associated with a disease state, or cancers or tumors derived from other tissue types. Non-limiting examples of such cells, tissues and organs include breast, colon, lung, prostate, testes, ovaries, cervix, esophagus, pancreas, spleen, liver, kidney, stomach, lymphocytic and brain, thereby providing a broad and advantageous applicability to the biomarkers described herein. Cells for analysis can be obtained by conventional procedures as known in the art, for example, tissue biopsy, aspiration, sloughed cells, e.g., colonocytes, clinical or medical tissue or cell sampling procedures.

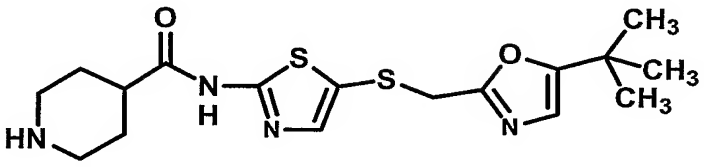
EXAMPLES:

As described below, transcription profiling was used to identify the biomarkers provided above in Table 1. Specifically, transcription profiling of the effect of a certain cdk2 inhibitor on peripheral blood mononuclear cells (PBMCs) was

first performed. Next, profiling of a cdk2 inhibitor-treated tumor cell line A2780 at multiple doses and time points was performed to establish a correlation of tumor site response with peripheral blood biomarkers. In order to establish the molecular target-specificity of the potential biomarkers, tumor cell line A2780 treated with anti-cdk2 oligonucleotides was also profiled. Overlapping gene expression changes, as shown in FIG. 1, were selected for further evaluation in human ovarian carcinoma xenograft A2780 that were treated with the cdk2 inhibitor (Example 2). The selected biomarkers were subjected to real-time PCR analysis in order to verify the observed changes from the gene chip analysis. These biomarkers are provided above in Table 1.

In the examples below, the following conditions were employed.

Cdk2 Inhibitor: The cdk2 inhibitor of the examples is N-5-[[5-(1,1-Dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl-4-piperidinecarboxamide, 0.5-L-tartaric acid salt:



0.5 L-Tartaric acid salt

This cdk2 inhibitor was solubilized in 100% DMSO at a concentration of 10 mM. Compound dilutions were made into respective growth media.

Cell Culture: The cell lines were maintained in RPMI-1640 plus 10% fetal bovine serum.

Clonogenic Growth Assay: The colony growth inhibition was measured for the A2780 ovarian carcinoma cells using a standard clonogenic assay. In this assay, 200 cells/well were seeded into 6-well tissue culture plates (Falcon™) (Becton, Dickinson and Company, Franklin Lakes, New Jersey, USA) and allowed to attach for 18 hours. Assay medium consisted of RPMI-1640 plus 10% fetal bovine serum. Cells were then treated in duplicate with a six concentration dose-response curve. The maximum concentration of DMSO never exceeded 0.25%. Cells were exposed to the cdk2 inhibitor for 4, 8, or 24 hours. The cdk2 inhibitor was then removed and the cells were washed with 2 volumes of PBS. The normal growth medium was then

replaced. Colonies were fed with fresh media every third day. Colony number was scored on day 10-14 using a Optimax imaging station. The cdk2 inhibitor concentration required to inhibit 50% or 90% of colony formation (IC_{50} or IC_{90}, respectively) was determined by non-linear regression analysis. The coefficient of variance (standard deviation/mean, n=3) = 30%.

Real-Time Quantitative PCR Assays: A Taqman® real-time-PCR fluorogenic assay (Applied Biosystems, Foster City, California, USA) was used to quantitate the levels of specific mRNA. The cdk2 inhibitor treated A2780s cells were harvested at approximately 70% confluence and total RNA was prepared using the Qiagen RNeasy 96 Kit.

Taqman® reactions were prepared as follows: 100 ng total RNA; 25 nM – 750 nM Forward Primer; 25 nM – 750 nM Reverse Primer; 200 nM – 400 nM Taqman® Probe (fluorescent dye labeled oligonucleotide primer); 1 X Buffer A (Applied Biosystems, Foster City, California, USA); 5.5 mM $MgCl_2$; 300 µM dATP, dGTP, dTTP, dCTP; 1 U Amplitaq Gold; 20 U Superscript 2; 1 U RNase Inhibitor. Real-time PCR was performed using an Applied Biosystems 7700 Sequence Detection System. Conditions were as follows: 48 °C for 20 minutes (reverse transcription), 95 °C for 10 minutes (denaturation and activation of Amplitaq Gold), 40 cycles of PCR (95 °C for 15 seconds, 60 °C for 1 minutes).

The Sequence Detection System generates a Ct (threshold cycle) value that is used to calculate a concentration for each input messenger RNA template. Messenger RNA levels for each gene or fragment thereof of interest were normalized to GAPDH message levels to compensate for variations in total RNA quantity in the input sample. This was done by generating GAPDH Ct values for each cell line. Ct values for the gene or fragments thereof of interest and GAPDH were inserted into the δδCt equation:

$$\text{Relative Quantity of Nucleic Acid Template} = 2^{\delta\delta Ct} = 2^{(\delta Cta - \delta Ctb)}$$

(δCta=Ct target – Ct GAPDH, δCtb = Ct reference – Ct GAPDH)

which was used to calculate a normalized relative message level.

Gene Chip Analysis: Gene chips were used to quantitate the levels of gene expression on a large-scale with Affymetrix human gene chips HG-U95A, B, and C

(Affymetrix, Inc., Santa Clara, California, USA). Gene chip hybridization was performed using an Affymetrix gene chip system including hybridization oven, washing station, scanner, and a computer workstation. Manufacturer's standard protocol was followed. Raw data were generated using Affymetrix Microarray Suite 4.0 software. A threshold of 20 units was assigned to any gene with a calculated expression level below 20, because discrimination of expression below this level could not be performed with confidence.

In Vitro Treatment of PBMC: PBMCs were isolated and incubated with the cdk2 inhibitor *in vitro*. Specifically, approximately 40 ml of blood were collected for the pilot study and then from 10 volunteers. The 40 ml of blood were then put into five Vacutainer™ CPT™ Mononuclear Cell Preparation Tubes (Product Number: 362753) (Becton, Dickinson and Company, Franklin Lakes, New Jersey, USA) with Sodium Heparin Anticoagulant 60/cs. Lymphocytes were then removed from the five Vacutainers™ pool and re-suspended in 20 ml of culture medium (RPMI, 10% serum, and glu/Pen/strep). Cells were counted at this step, and then centrifuged gently and then suspended with 4.0 ml of culture medium. Cells were then plated into 6 well plates (0.5 ml/well). Culture medium containing the cdk2 inhibitor or vehicle (3.5 ml) was then added to each well to give a final concentration of 100 nM cdk2 inhibitor in experimental wells, and also a final concentration of 1000 nM cdk2 inhibitor in experimental wells for the 10 subjects.

RNA and protein samples were harvested at 4 and 24 hours after addition of the cdk2 inhibitor. RNA was prepared using the RNeasy-mini RNA kit according to the manufacturer's specifications (Qiagen, Valencia, California, USA). For protein samples, cells were washed once with PBS before extracting with 0.5-1.0 ml of modified RIPA buffer [50 mM Tris (pH 8), 150 mM NaCl, 1% NP-40, 0.5% Na-deoxycolate, 0.1% SDS, 0.1% Na3VO4, 0.1 mM NaF, 10 mM β-glycerophosphate, plus Complete® protease inhibitors (Boehringer Mannhiem GmbH, Germany)]. Lysates were frozen at –80 °C. Viability of cells at different time points following the cdk2 inhibitor treatment was determined by trypan blue exclusion.

Western Blot Analysis: The cdk2 inhibitor treated A2780s cells were harvested at approximately 70% confluence and total protein was prepared by lysing the cells in RIPA [50 mM Tris (pH 8), 150 mM NaCl, 1% NP-40, 0.5% Na-

deoxycolate, 0.1% SDS, 0.1% Na3VO4, 0.1 mM NaF, 10 mM β-glycerophosphate, plus Complete® protease inhibitors (Boehringer Mannhiem GmbH, Germany)] buffer. Cell pellets were resuspended at a density of $< 2 \times 10^7$ cells/ml and incubated for 20 minutes on ice followed by a high speed 14,000 rpm centrifugation. The protein supernatant was then removed from the debris and protein content was quantitated using the Micro-BCA assay (Pierce Biotechnology, Inc., Rockford, Illinois, USA). Treated extracts (25 µg/lane) were then separated using a 10% SDS-polyacrilamide gel (10.5 x 14 cm). Proteins were then transferred from the gel to PVDF-membrane (Millipore Corporation, Billerica, Massachusetts, USA) by exposure to 0.8 Amp/cm^2 in a semi-dry blotting apparatus (Hoefer Scientific Instruments, San Francisco, California, USA). PVDF protein blots were then blocked with 5% non-fat milk in TTBS (0.1% Tween 20 in Tris-buffered saline). Blots were then probed with primary antibody (mouse anti-cdk2 clone D-12, Santa Cruz Biotechnology, Santa Cruz, California, USA) in 5% non-fat milk in TTBS for 1-2 hours, followed by three washes with TTBS. An HRP-conjugated secondary antibody (HRP conjugated goat anti-mouse IgG, Promega Corp., Madison, Wisconsin, USA) was then incubated with the blots in TTBS for 30 minutes. The blots were then washed three times with TTBS and developed with ECL-plus western blotting detection system (Amersham Biosciences, Piscataway, New Jersey, USA).

Cdk2 Antisense Treatment: A mixture of five antisense oligonucleotides targeted against cdk2 mRNA having the following sequences was used: GCAGUAUACCUCUCGCUCUUGUCAA (SEQ ID NO:2775); UUUGGAAGUUCUCCAUGAAGCGCCA (SEQ ID NO:2776); GUCCAAAGUCUGCUAGCUUGAUGGC (SEQ ID NO:2777); CCCAGGAGGAUUUCAGGAGCUCGGU (SEQ ID NO:2778); UAGAAGUAACUCCUGGCCACACCAC (SEQ ID NO:2779). All gene modulations were based on relative levels of RNA in antisense treated cells versus reverse control oligonucleotide treated cells.

A2780s cells were plated in 6-well tissue culture plates at a density of 1-2 X 10^5 cells/well. After an overnight incubation, cells were transfected with the antisense oligonucleotide mixture using Lipofectamine 2000 (Invitrogen Life Technologies, Carlsbad, California, USA). Briefly, a 10X lipid solution (10 ug/ml in OptiMEM)

and a 10X oligonucleotide mixture (0.5 uM in OptiMEM) were prepared. A 5X solution of lipid/oligonucleotide complex was then prepared by mixing equal volumes of 10X lipid solution and 10X oligonucleotide mixture. The 5X solution of lipid/oligonucleotide complex was allowed to incubate at room temperature for 15 minutes to allow complexes to form. After incubation, the 5X lipid/oligonucleotide complex was diluted in RPMI containing 10% Fetal Bovine Serum to produce a 1X transfection reagent. Cells in 6-well culture plates were transfected by replacing the overnight growth media with 1X transfection reagent. Cells were then incubated at various times (0, 12, 16, 20, and 24 hours) prior to harvesting RNA for analysis by Taqman® real-time-PCR fluorogenic assay. In every experiment, an extra well was transfected with a fluoresceinated random oligonucleotide to determine the transfection efficiency using flow cytometry. For all experiments, between 85% and 95% of A2780s cells were transfected.

Example 1 - Transcription Profiling of Peripheral Blood Mononuclear Cells (PBMCs) Following Treatment with Cdk2 Inhibitor, and A2780S Ovarian Carcinoma Cells Following Treatment with Cdk2 Inhibitor or Anti-cdk2 Antisense Oligonucleotides

To identify biomarkers, transcriptional profiling was obtained for (i) PBMCs following treatment with cdk2 inhibitor, (ii) A2780S ovarian carcinoma cells following treatment with cdk2 inhibitor, and (iii) A2780S ovarian carcinoma cells following treatment with anti-cdk2 antisense oligonucleotides.

Table 2 lists the doses and time course used for treatment of the A2780 and PBMC cell types.

Table 2 - Experimental design

Cell Type	Treatment	Drug Dose (nM)	Time course (hours)
A2780	cdk2 inhibitor	0, 20, 100, 200	0, 1, 2, 4, 6, 24
PBMC (pooled 10 subjects)	cdk2 inhibitor	0, 100	0, 4, 24
PBMC (pilot)	cdk2 inhibitor	0, 100, 1000	0, 4, 24
A2780	Anti-cdk2 oligonucleotide	Antisense oligo and control	0, 12, 16, 20, 24

Treatment of A2780 and PBMC was carried out as described above. The doses of the cdk2 inhibitor were derived from an understanding of the kinetics of tumor cell growth inhibition by the cdk2 inhibitor as assessed by proliferation and clonogenic assays (Table 3). This study clearly demonstrated that growth inhibition by the cdk2 inhibitor was time dependent. A minimal exposure of 8 hours was required for effective inhibition of colony formation. The values obtained from the 24 hour clonogenic assay were in good agreement with the 72 hour proliferation assay.

Table 3- Inhibition of colony formation by cdk2 inhibitor

	IC_{50} (nM)	IC_{90} (nM)
A2780s Clonogenic assay, 4 hr. exposure	302	> 1000
A2780s Clonogenic assay, 8 hr. exposure	154	303
A2780s Clonogenic assay, 24 hr. exposure	166	208
A2780s, 72 hr. XTT assay	95	170

A pilot experiment of *ex vivo* treatment of PBMC from one healthy volunteer with the cdk2 inhibitor was first performed. Subsequently, PBMCs from ten healthy human subjects were collected and treated *ex vivo* with the cdk2 inhibitor. Total RNA was isolated and hybridized to gene chips.

Antisense inhibition of cdk2 expression was optimized for A2780 cells and carried out as described above. Under these conditions, cdk2 protein levels decreased 90% after 24 hours exposure. As shown in FIG. 2A, consistent reduction of cdk2 protein was observed in all three antisense treated wells (AS) relative to the controls wells (C). This resulted in a block in cell cycle progression and apoptosis that is similar to the cdk2 inhibitor treated A2780s cells. The decrease in cdk2 protein in relation to time of exposure was also determined. As shown in FIG. 2B, cdk2 levels were maximally inhibited at 12 hours and protein levels remained reduced through 24 hours.

Example 2 - Selection of Biomarkers

In order to identify biomarkers for the cdk2 inhibitor that can be used as surrogate endpoints in PBMC and have molecular target-specific response, the

expression profiles of the three sets of experiments in Example 1 were compared. Overlapping gene expression changes were selected as shown in FIG. 1.

To allow for the identification of cdk2 specific responses as well as compound specific changes at gene expression level, a statistical method was used to select genes that have gene expression changes associated with dose and time of treatment in the cdk2 inhibitor treated A2780s sample set. The data were analyzed using an analysis of variance (ANOVA) model to study the compound's dose effect and time effect on each gene. First, the data were rescaled to eliminate the chip effects by a linear regression technique. Then, an ANOVA model was fitted for each gene based on two factors – dose and time. The F-test was used to determine if there was significant dose or time effect in terms of the changes in the expression level of a particular gene. Genes with the p-value less than 0.05 in both dose effect test and time effect test were identified. The genes identified with a p-value of less than 0.05 in both dose effect and time effect are provided Table 1.

Overlapping gene expression changes from the three sets of Example 1 were selected for further evaluation in human ovarian carcinoma xenograft A2780 treated with the cdk2 inhibitor.

The human ovarian carcinoma xenograft A2780s were maintained in Balb/c nu/nu nude mice. Tumors were propagated as subcutaneous (sc) transplants using tumor fragments obtained from donor mice. For the cdk2 inhibitor treatment, tumors were allowed to grow to the pre-determined size window of approximately 100-200 mg (tumors outside the range were excluded) and animals were evenly distributed to various treatment and control groups (n=6). Treatment of each animal was based on individual body weight.

The cdk2 inhibitor was first dissolved in a mixture of Cremophor®/ethanol (50:50). One hour prior to administration, the cdk2 inhibitor was diluted with water so that the dosing solutions contained the specified excipient composition, i.e., Cremophor®/ethanol/water (1:1:8, v/v). The volume of all compounds injected was 0.01 ml/gm of mice. The cdk2 inhibitor was administered as a bolus injection intraperitoneal at doses of 36 and 18 mg/kg. Tumor and plasma were sampled at the time points of 4, 7, and 24 hour post treatment. Plasma sample was frozen

immediately at -80 °C for pharmacokinetic analysis, and tumor sample was preserved in RNAase free buffer for pharmacogenomic analysis.

Once certain genes were selected as potential biomarkers, real-time PCR assays using fluorescent MGB Taq-man probes were developed as described above. The selected genes were subjected for real-time PCR analysis as described above in order to verify the observed changes from gene chip analysis.

The biomarker W28729 (SEQ ID NO: 1246) was selected as a preferred marker. A same-well multiplex real-time quantitative PCR assay on this biomarker with normalization control, house-keeping gene GAPDH, was developed using Taq-man MGB probes. Gene expression changes for W28729 were measured with real-time quantitative PCR assays in the following sample sets: A2780 human tumor cell line treated with 20 nM of cdk2 inhibitor for different durations (FIG. 3A), PBMC treated with 100nM cdk2 inhibitor at 4 hours (FIG. 3B); and human ovarian carcinoma xenograft A2780 treated with cdk2 inhibitor at doses of 36 and 18 mg/kg for different durations (FIG. 3C). In cultured A2780 tumor cells, induction of W28729 occurred upon treatment with 20 nM of cdk2 inhibitor, and was detected 1h after treatment. Upregulation of W28729 expression was also observed upon treatment of human PBMC in vitro with the cdk2 inhibitor. Treatment of nude mice bearing A2780 xenografts with efficacious doses of the cdk2 inhibitor also resulted in induction of W28729, and there was a dose-dependent prolongation of the duration of gene induction.

Example 3 - W28729 upregulation

The following experimental methods were used to further study W28729 upregulation.

Patient inclusion criteria: The patient inclusion criteria included: primary solid malignancy refractory to current therapy and adequate bone marrow, hepatic, and renal function.

Treatments: Two different treatments were undertaken: (i) 174-001 Study: 1 hr infusion of BMS-387032 q 3 wks; and (ii) 174-002 Study: 24 hr infusion of BMS-387032 q 3 wks. The sampling times were pre-dose, and 2, 6, 24 hour post-dose.

W28729 Expression Analysis: RT-PCR. Patient blood samples were collected in PAXgene™ Blood Collection Tubes (Qiagen, catalog #762155). Total RNA was isolated following the manufacturer's instructions using a PAXgene™ blood RNA Kit (Qiagen, catalog #762134). W28729 and GAPDH (housekeeping gene) RNA abundance was measured by Taqman assays, using an ABI PRISM 7900 HT Sequence Detection System. W28729 abundance was normalized relative to GAPDH. Primer and probe sequences are as shown below.

W28729:	(5+)	AGTACCGTGAGGTTCCTGATGTG (SEQ ID NO:2780)
	(3+)	TGCCAAGCTGAGATCCTAAGG (SEQ ID NO:2781)
	Probe	TTATGCGGCACGCTT (SEQ ID NO:2782)
GAPDH:	(5+)	CGACAGTCAGCCGCATCTT (SEQ ID NO:2783)
	(3+)	AAATCCGTTGACTCCGACCTT (SEQ ID NO:2784)
	Probe	CATCGCTCAGACACCA (SEQ ID NO:2785)

Results

Preclinical Xenografts: In A2780 xenografts given bolus i.p. treatments with BMS-387032, the induction of W28729 in the tumors occurred in a transient, dose-dependent manner (FIG. 4A). At the minimum efficacious dose (MED) of 18 mg/kg/day, the induction was sustained for more than 6 hours. In an infusion regimen using the minimum efficacious dose of 40 mg/kg, gene induction was sustained for at least 16 hours. The gene induction in tumors was accompanied by a strikingly similar pattern of induction of the mouse ortholog sequence (SEQ ID NO:2786; a fragment of mouse genomic DNA sequence locus AL590994), as detected in PBMC isolated from the tumor mice (FIG. 4B). Treatment with an efficacious regimen results in > 2 fold induction of the sequence for 6 hours or longer. These data support the use of W28729 gene induction in tumor as a pharmacodynamic biomarker. In addition, these observations support the use of PBMC as a surrogate tissue for monitoring changes in gene expression, that result from treatment with the cdk2 inhibitor.

Clinical Trials: In the CA174-001 study (1 hour infusion), transient induction of W28729 was detected in PBMC at 2 hours and returned to baseline levels by 6 hours (FIG. 5A). In the CA174-002 study (24 hour infusion), there was modest induction of W28729 expression, which was sustained for 6 hours following end of infusion (FIG. 5B). Each line in FIGS. 5A and 5B represents the extent of gene

induction for an individual patient at the specified times after dosing. There was an inverse relationship between baseline expression and the level of maximal gene induction in the CA174-001 study (FIG. 6A). There was no clear relationship between baseline expression and induction magnitude in the CA174-002 study (FIG. 6B). Interpretation of the data from the 24 hour infusion study is difficult because expression data were collected more than 24 hours after the beginning of dosing.

FIGS. 7A and 7B illustrate W28729 induction as a function of dose (FIG. 7A) and AUC (FIG. 7B) from the CA174-001. As shown in FIGS. 7A and 7B, there was a linear relationship between W28729 gene induction and dose or exposure of the cdk2 inhibitor. FIG. 8 provides a prediction of W28729 changes by baseline expression of W28729 and the cdk inhibitor exposure in the CA174-001 study. W28729 gene expression changes can be predicted by the formula: Δ(W28729 expression) = A*AUC*(Baseline expression)^B, wherein A = 0.000619 and B = -0.537. Induction of W28729 gene can be reliably predicted from drug exposure and baseline W28729 expression.

Since the pre-clinical data suggest that the extent and duration of W28729 gene induction correlate with anti-tumor efficacy, the disease outcome of patients who showed different W28729 induction in the CA174-001 study was examined. Interestingly, those patients with high induction appeared to have the most favorable outcome (FIG. 9). These results suggest that W28729 induction is a surrogate marker for prediction of clinical outcome of agents that modulate cdk.

CLAIMS:

What is claimed is:

1. A method for testing or predicting whether a mammal will respond therapeutically to a method of treating cancer comprising administering an agent that modulates cdk activity, wherein the method comprises:

(a) measuring in the mammal the level of the nucleotide sequence of SEQ ID NO:1246;

(b) exposing the mammal to the agent that modulates cdk activity; and

(c) following the exposing of step (b), measuring in the mammal the level of the nucleotide sequence of SEQ ID NO:1246,

wherein a difference in the level of the nucleotide sequence of SEQ ID NO:1246 measured in step (c) compared to the level of the nucleotide sequence of SEQ ID NO:1246 measured in step (a) indicates that the mammal will respond therapeutically to said method of treating cancer.

2. The method of claim 1 wherein said agent is N-5-[[5-(1,1-Dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl-4-piperidinecarboxamide, 0.5-L-tartaric acid salt.

3. A method for determining whether a mammal is responding to an agent that modulates cdk activity, comprising:

(a) obtaining a biological sample from the mammal;

(b) measuring in said biological sample the level of the nucleotide sequence of SEQ ID NO:1246;

(c) correlating said level of the nucleotide sequence of SEQ ID NO:1246 with a baseline level; and

(d) determining whether the mammal is responding to an agent that modulates cdk activity based on said correlation.

4. The method of claim 3 wherein said agent is N-5-[[5-(1,1-Dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl-4-piperidinecarboxamide, 0.5-L-tartaric acid salt.

5. A method for testing or predicting whether a mammal will respond therapeutically to a method of treating cancer comprising administering an agent that modulates cdk activity, wherein the method comprises:

(a) measuring in the mammal the level of at least one biomarker selected from the biomarkers of Table 1;

(b) exposing the mammal to the agent that modulates cdk activity;

(c) following the exposing of step (b), measuring in the mammal the level of the at least one biomarker,

wherein a difference in the level of the at least one biomarker measured in step (c) compared to the level of the at least one biomarker measured in step (a) indicates that the mammal will respond therapeutically to said method of treating cancer.

6. The method of claim 5 wherein said agent is N-5-[[5-(1,1-Dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl-4-piperidinecarboxamide, 0.5-L-tartaric acid salt.

7. The method of claim 5 wherein the at least one biomarker is a protein.

8. The method of claim 5 wherein the at least one biomarker is an mRNA transcript.

9. A method for determining whether a mammal is responding to an agent that modulates cdk activity, comprising:

(a) obtaining a biological sample from the mammal;

(b) measuring in said biological sample the level of at least one biomarker selected from the biomarkers of Table 1;

(c) correlating said level of at least one biomarker with a baseline level; and

(d) determining whether the mammal is responding to an agent that modulates cdk activity based on said correlation.

10. A method for determining whether a mammal is responding to an agent that modulates cdk activity, comprising:

(a) exposing the mammal to the agent; and

(b) following the exposing of step (a), measuring in the mammal the level of at least one biomarker selected from the biomarkers of Table 1,

wherein a difference in the level of the at least one biomarker measured in step (b), compared to the level of the at least one biomarker in a mammal that has not been exposed to said agent, indicates that the mammal is responding to the agent that modulates cdk activity.

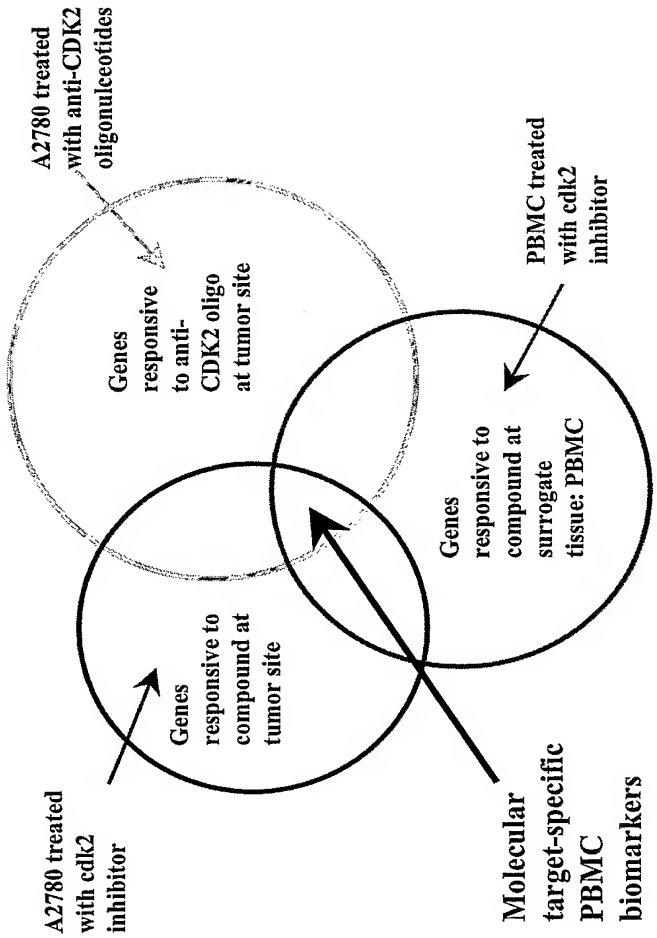

A2780 treated with anti-CDK2 oligonulceotides
Genes responsive to anti-CDK2 oligo at tumor site
PBMC treated with cdk2 inhibitor
Genes responsive to compound at surrogate tissue: PBMC
Genes responsive to compound at tumor site
A2780 treated with cdk2 inhibitor
Molecular target-specific PBMC biomarkers

FIG. 1

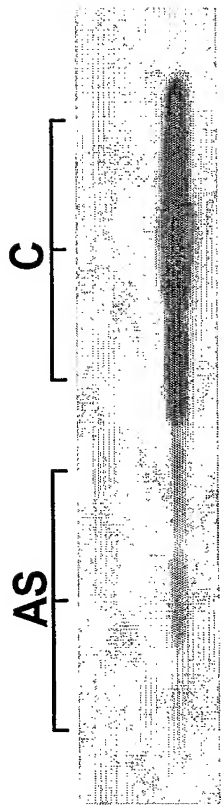


FIG. 2A

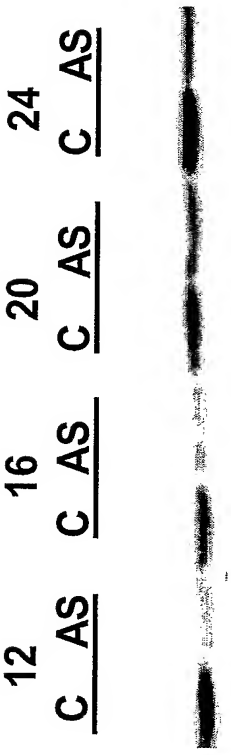


FIG. 2B

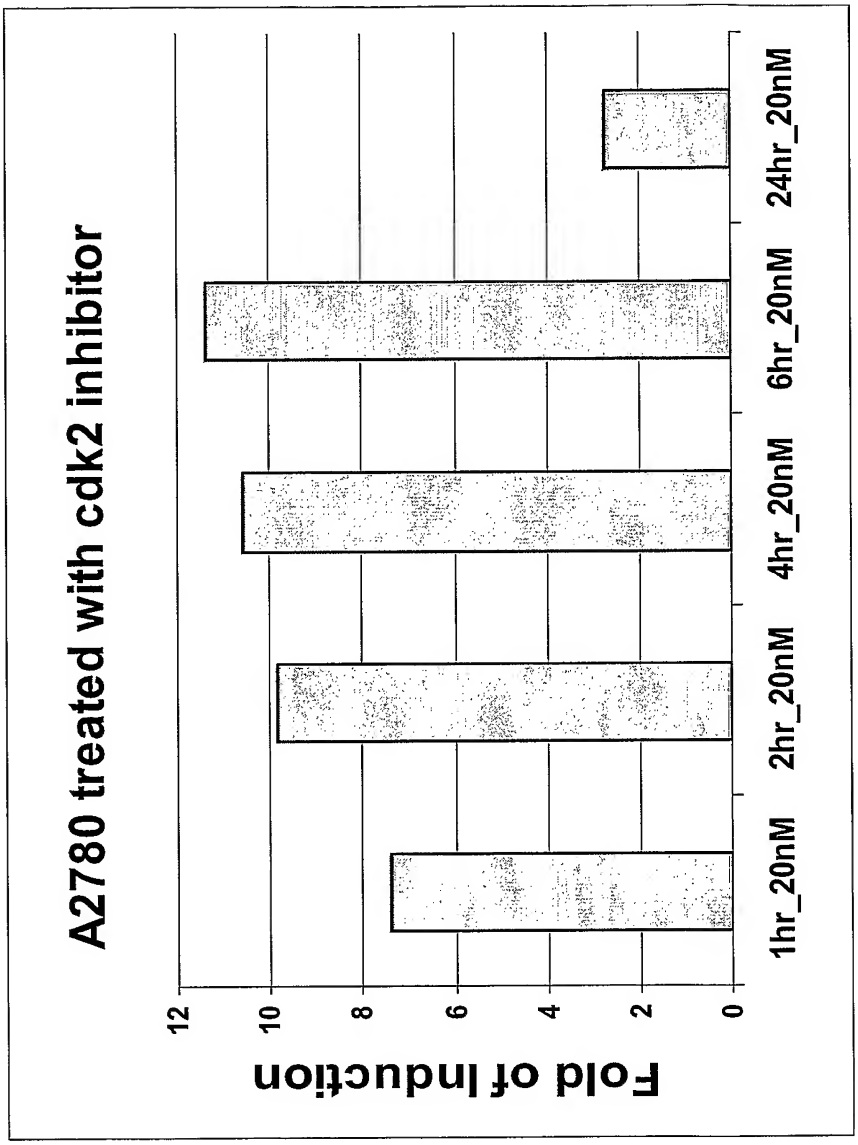

A2780 treated with cdk2 inhibitor
Fold of Induction
0
2
4
6
8
10
12
1hr_20nM
2hr_20nM
4hr_20nM
6hr_20nM
24hr_20nM

FIG. 3A

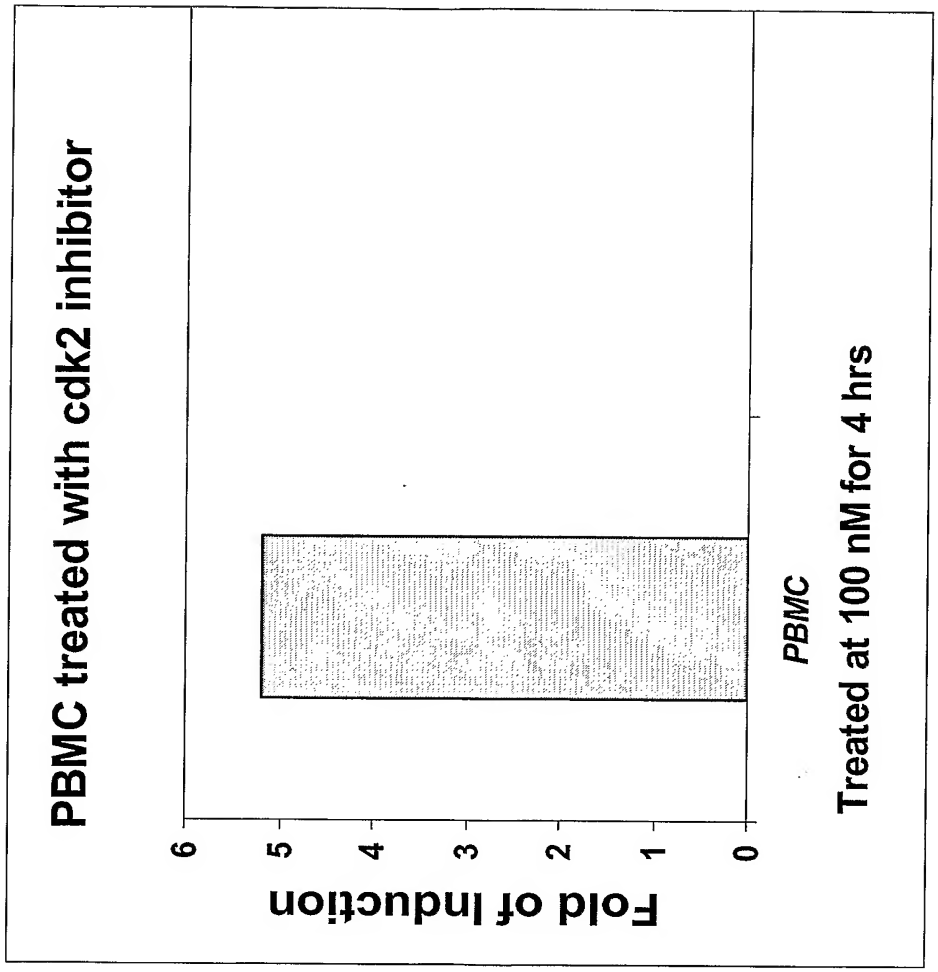

PBMC treated with cdk2 inhibitor
Fold of Induction
0
1
2
3
4
5
6
PBMC
Treated at 100 nM for 4 hrs

FIG. 3B

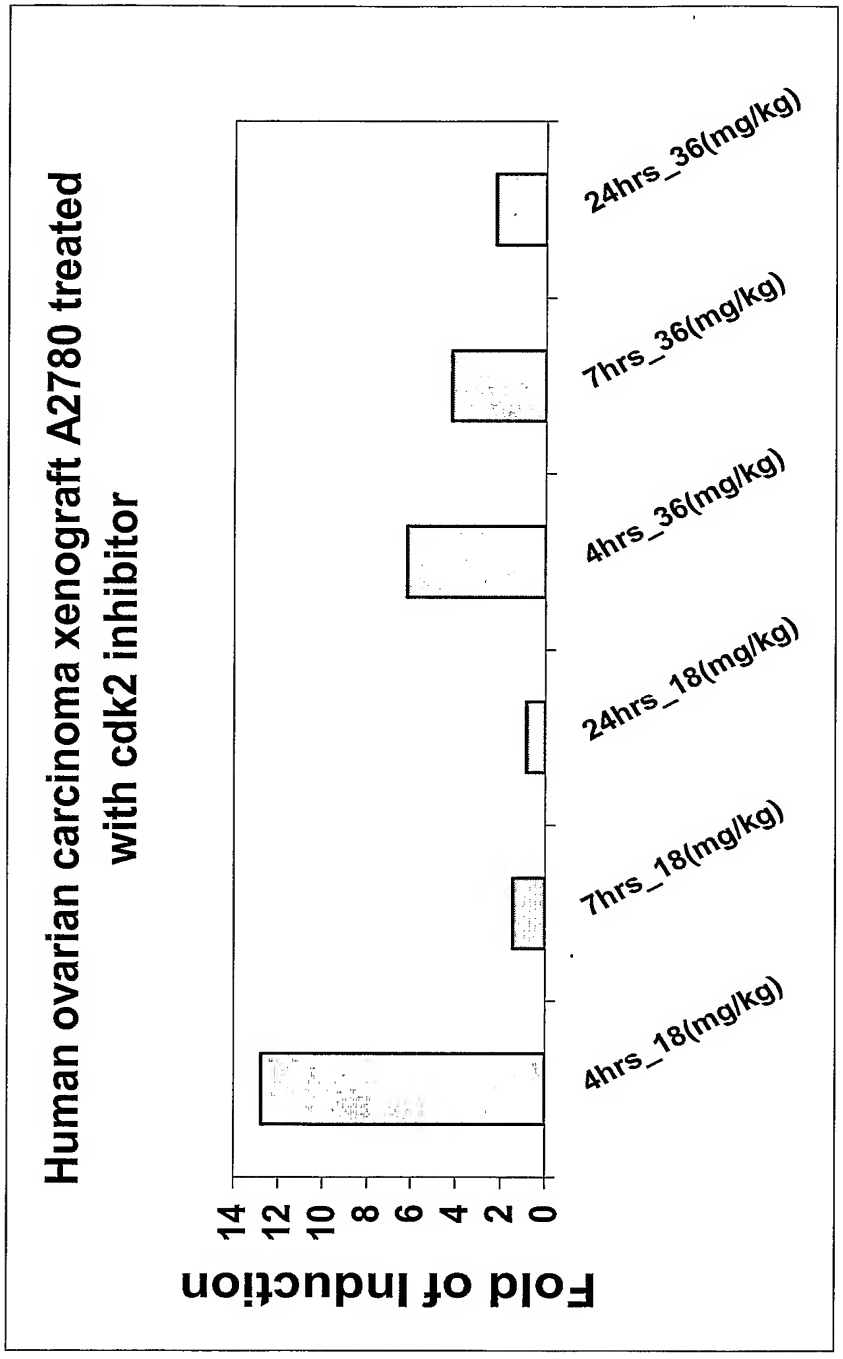

Human ovarian carcinoma xenograft A2780 treated with cdk2 inhibitor
Fold of Induction
0
2
4
6
8
10
12
14
24hrs_36(mg/kg)
7hrs_36(mg/kg)
4hrs_36(mg/kg)
24hrs_18(mg/kg)
7hrs_18(mg/kg)
4hrs_18(mg/kg)

FIG. 3C

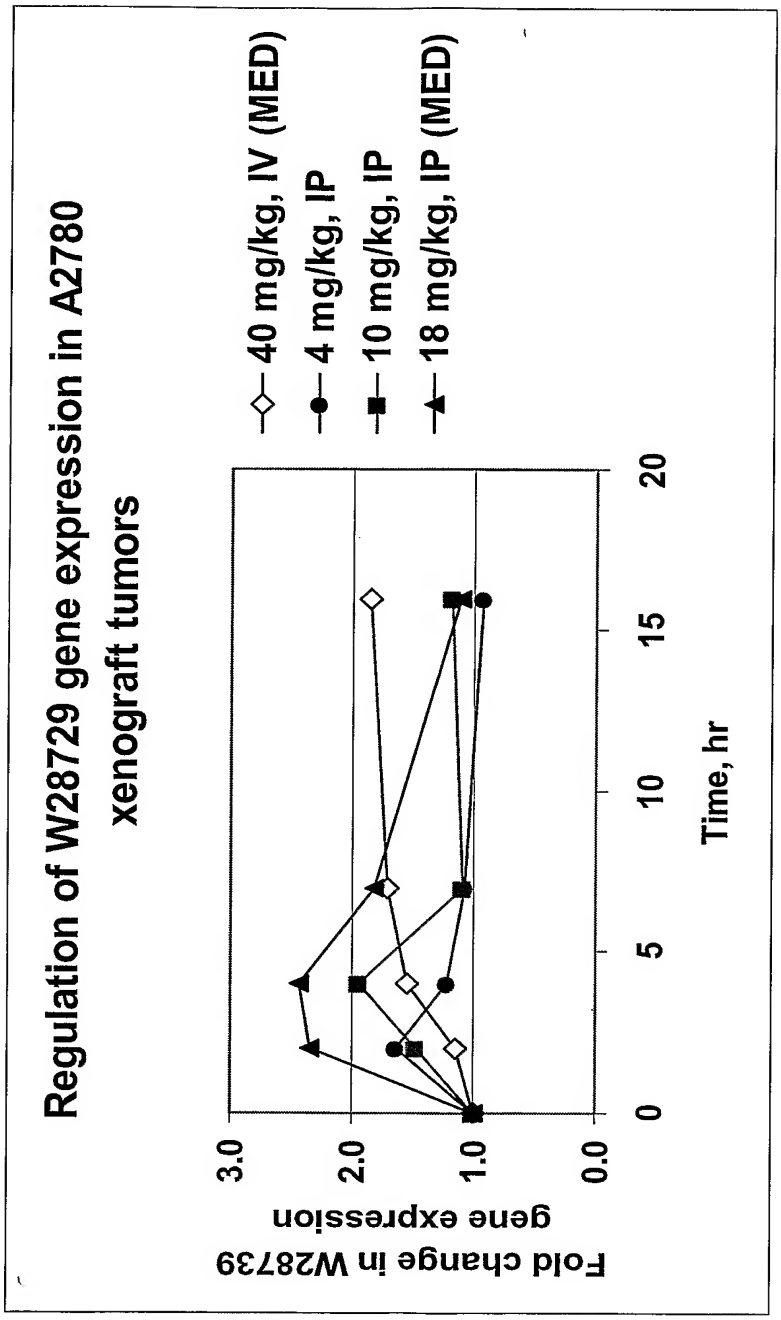

Regulation of W28729 gene expression in A2780 xenograft tumors
40 mg/kg, IV (MED)
4 mg/kg, IP
10 mg/kg, IP
18 mg/kg, IP (MED)
Fold change in W28739 gene expression
3.0
2.0
1.0
0.0
0
5
10
15
20
Time, hr

FIG. 4A

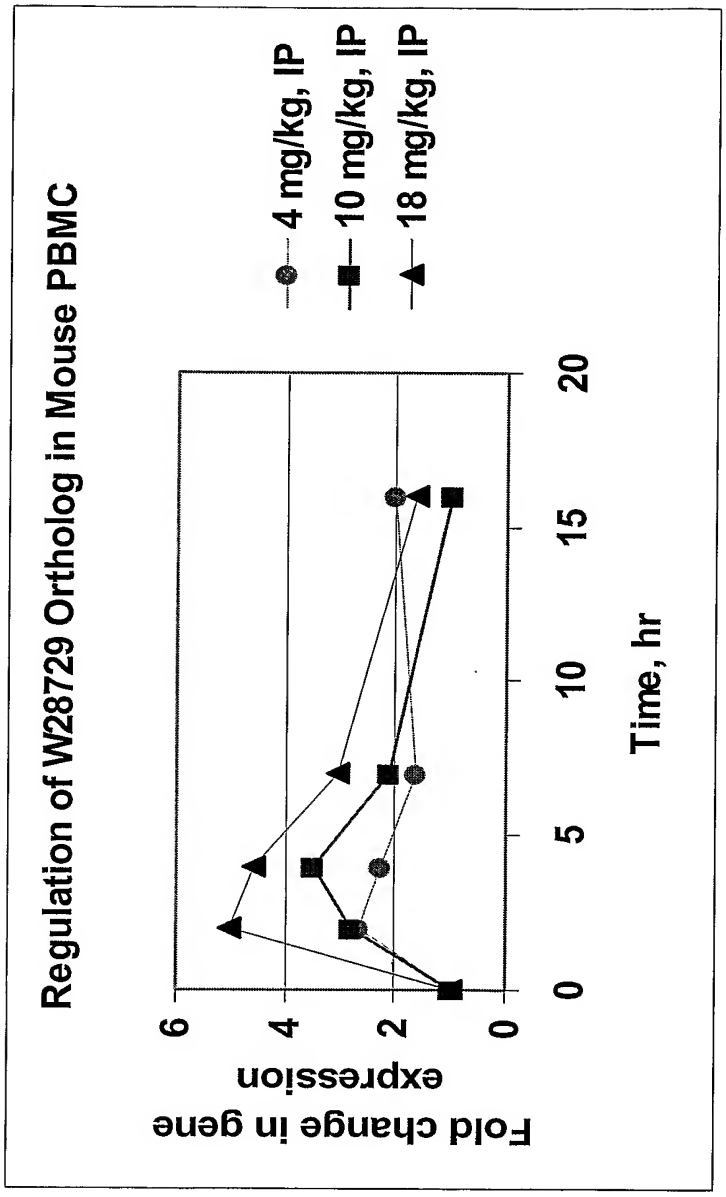

Regulation of W28729 Ortholog in Mouse PBMC
4 mg/kg, IP
10 mg/kg, IP
18 mg/kg, IP
Fold change in gene expression
0
2
4
6
0
5
10
15
20
Time, hr

FIG. 4B

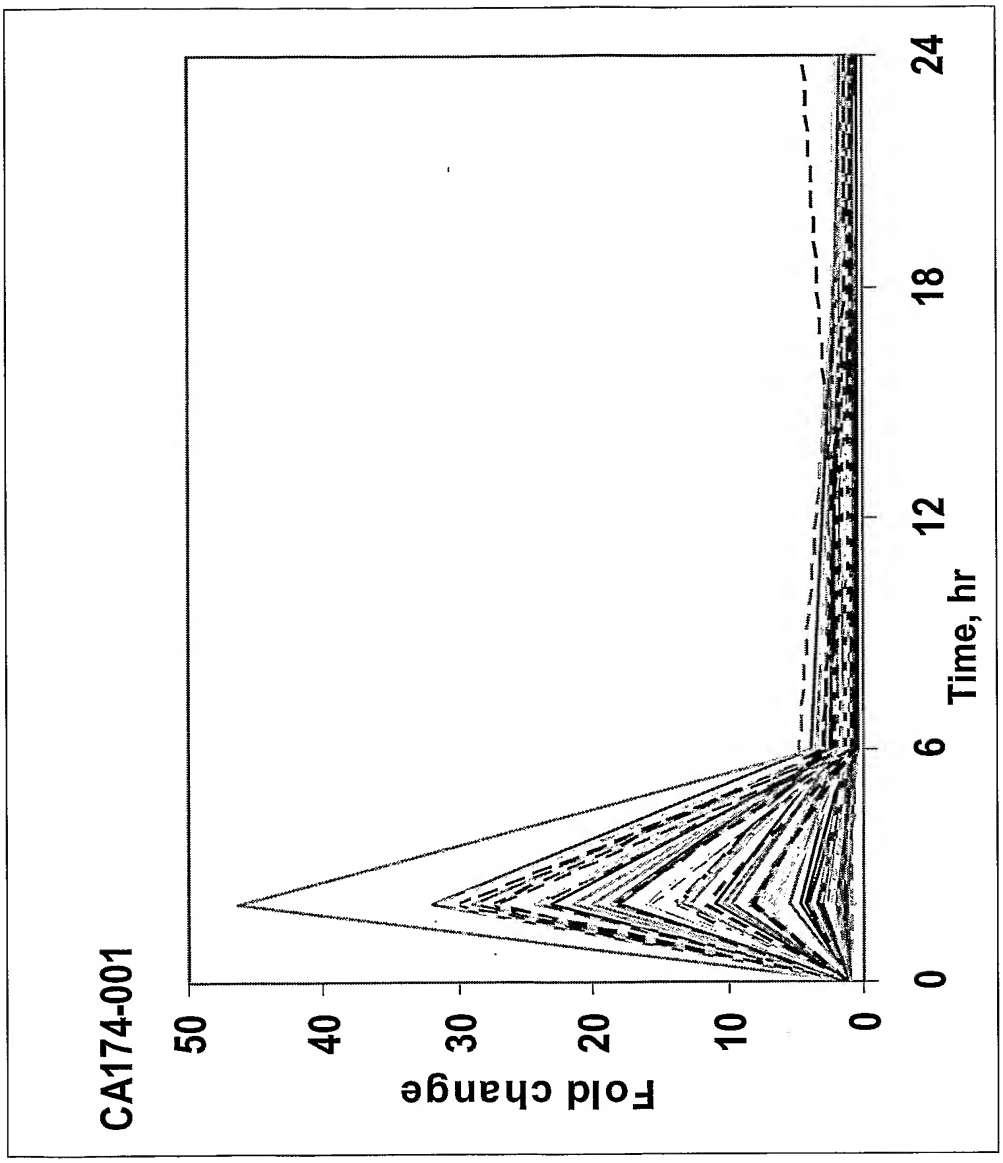


FIG. 5A

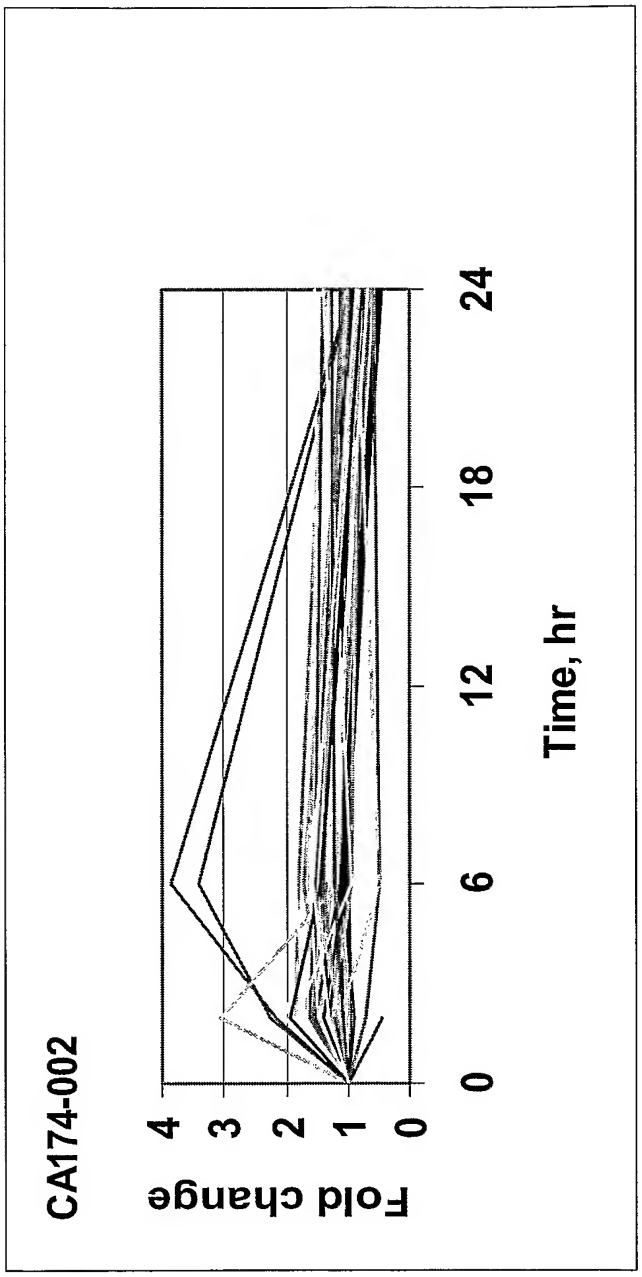


FIG. 5B

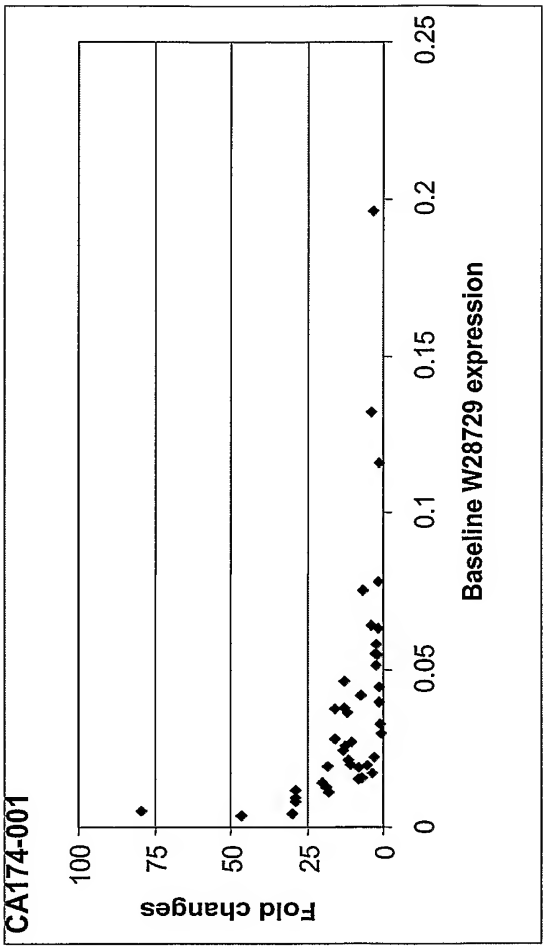

CA174-001
Fold changes
100
75
50
25
0
0
0.05
0.1
0.15
0.2
0.25
Baseline W28729 expression

FIG. 6A

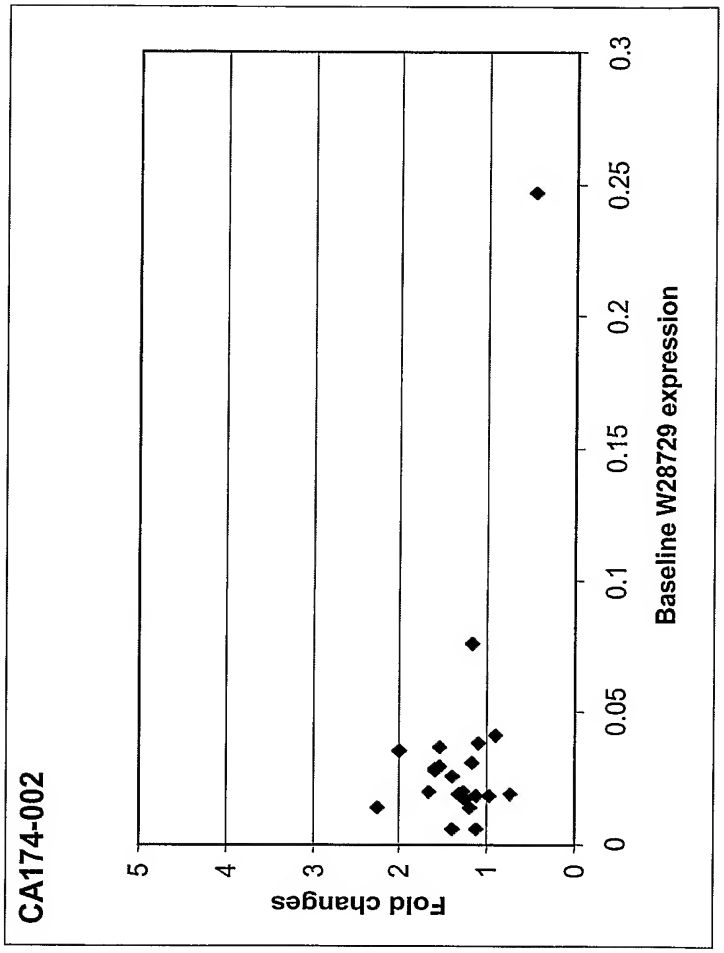

CA174-002
Fold changes
0
1
2
3
4
5
0
0.05
0.1
0.15
0.2
0.25
0.3
Baseline W28729 expression

FIG. 6B

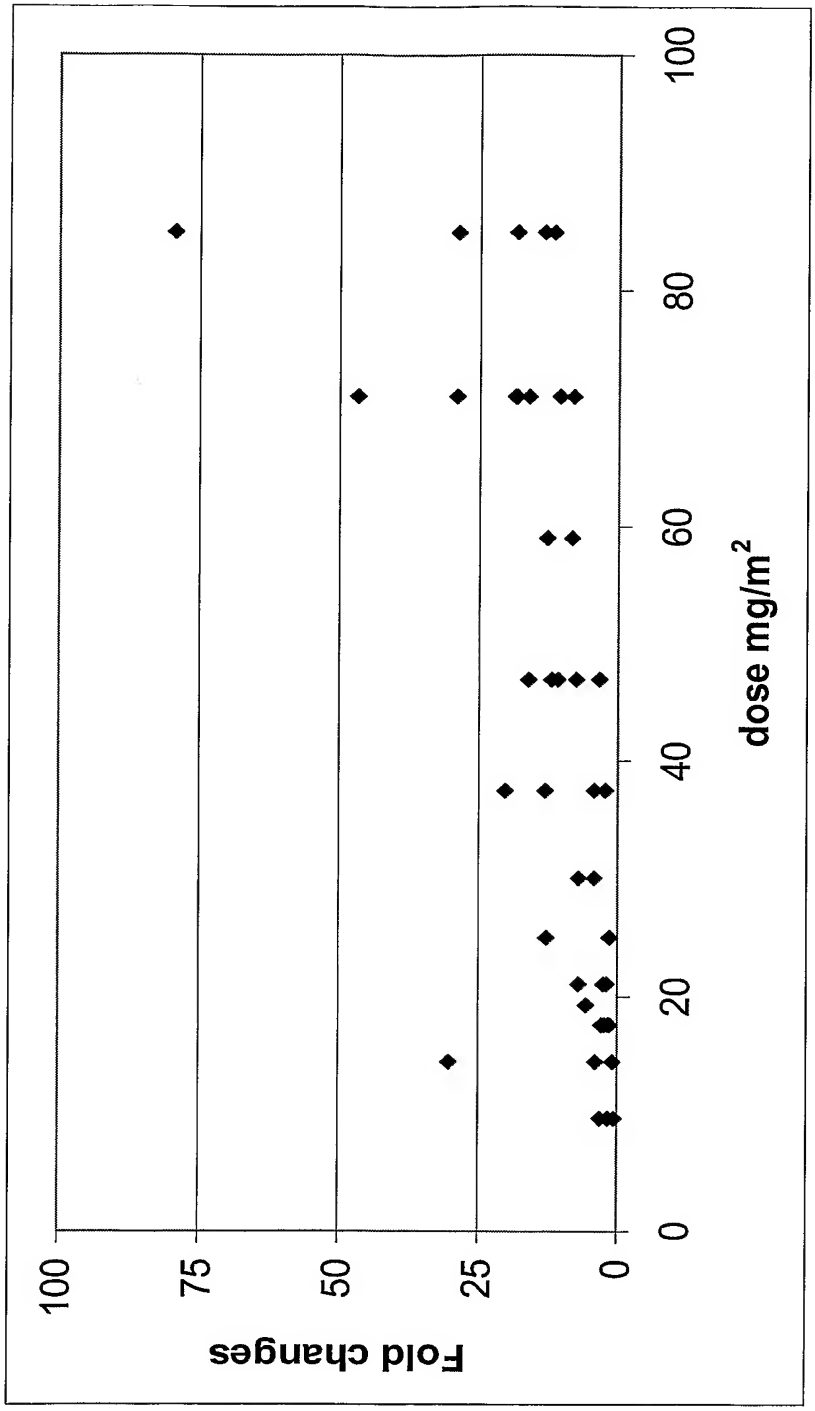


FIG. 7A

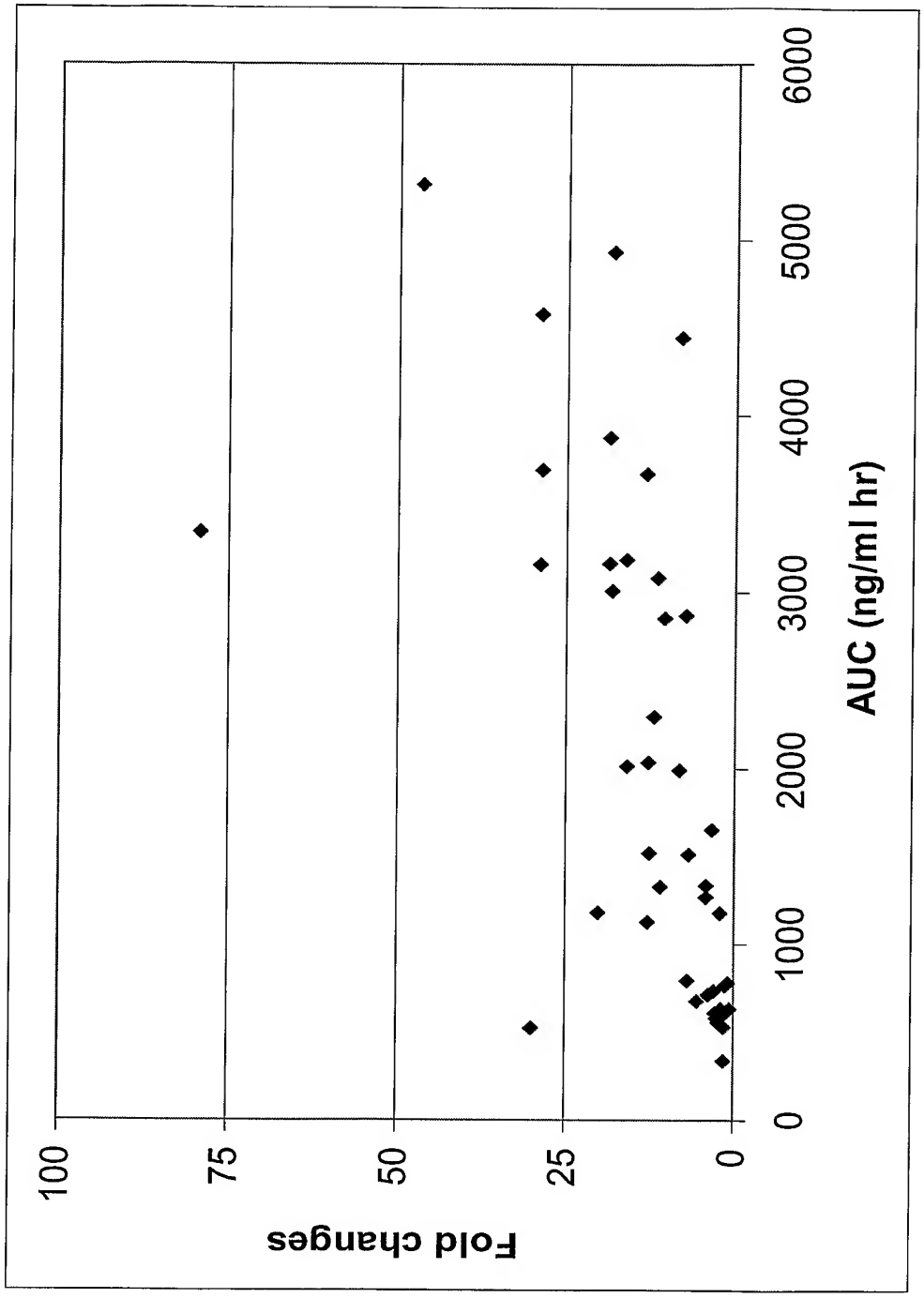

Fold changes
100
75
50
25
0
0
1000
2000
3000
4000
5000
6000
AUC (ng/ml hr)

FIG. 7B

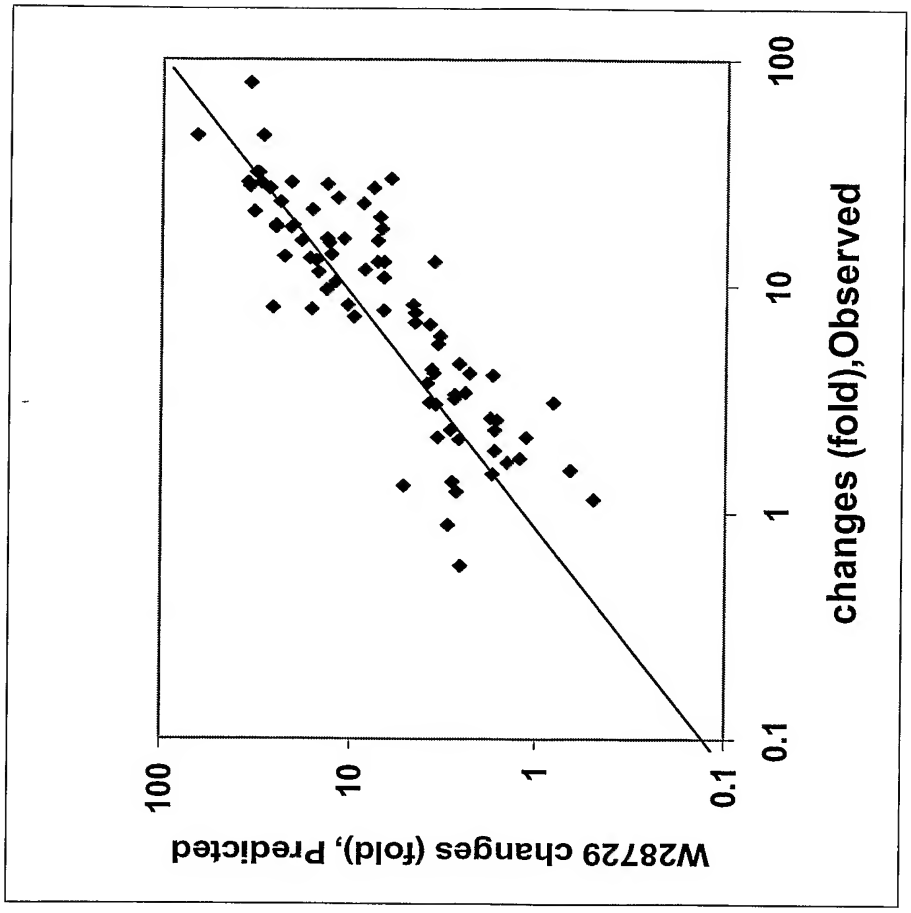

W28729 changes (fold), Predicted
100
10
1
0.1
changes (fold),Observed
0.1
1
10
100

FIG. 8

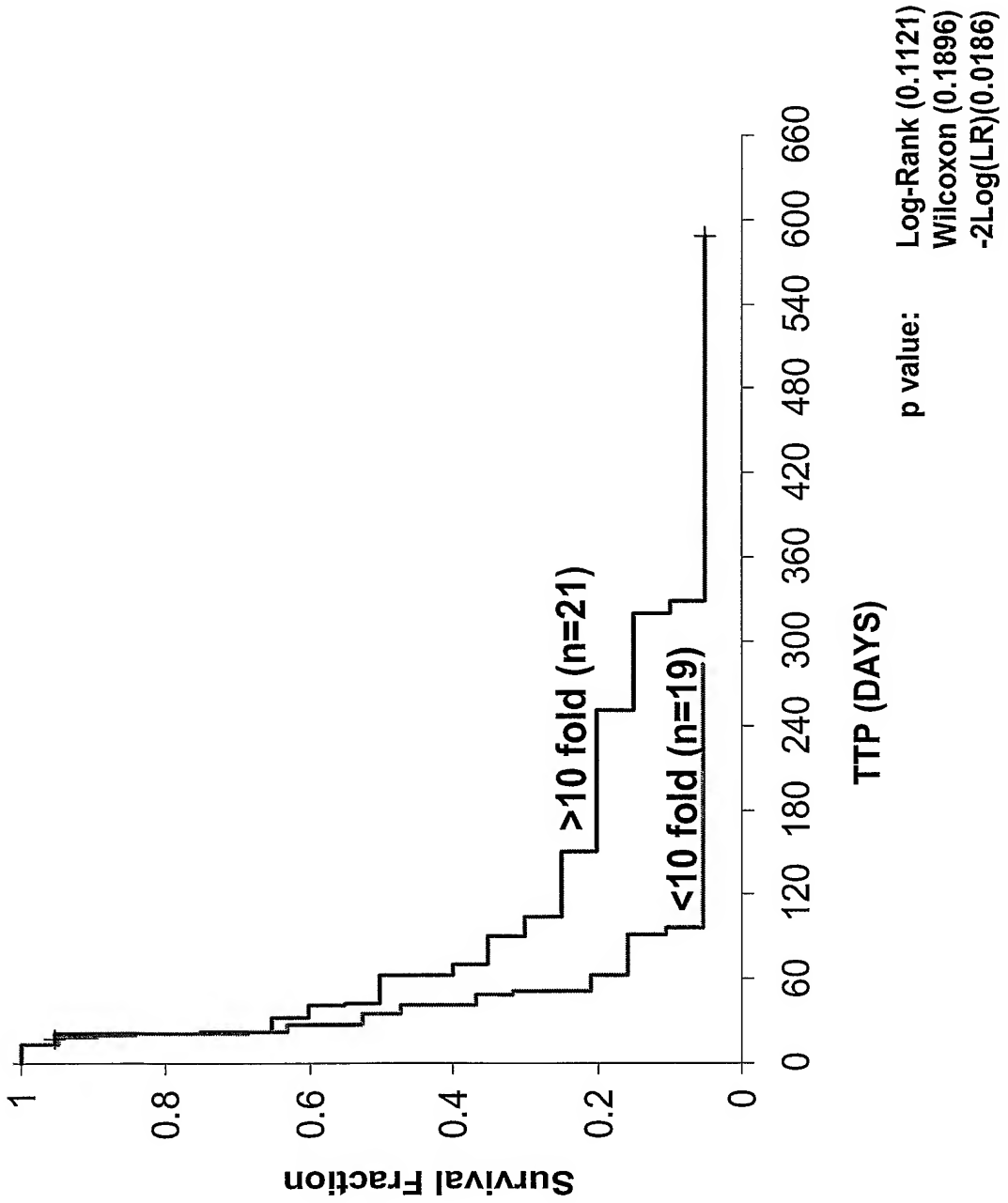

Survival Fraction
1
0.8
0.6
0.4
0.2
0
0 60 120 180 240 300 360 420 480 540 600 660
TTP (DAYS)
>10 fold (n=21)
<10 fold (n=19)
p value:
Log-Rank (0.1121)
Wilcoxon (0.1896)
-2Log(LR)(0.0186)

FIG. 9

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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C12M 1/00 (2006.01)

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(74) Agents: **GOLIAN, Paul, D.** et al.; P.O. Box 4000, Princeton, NJ 08543-4000 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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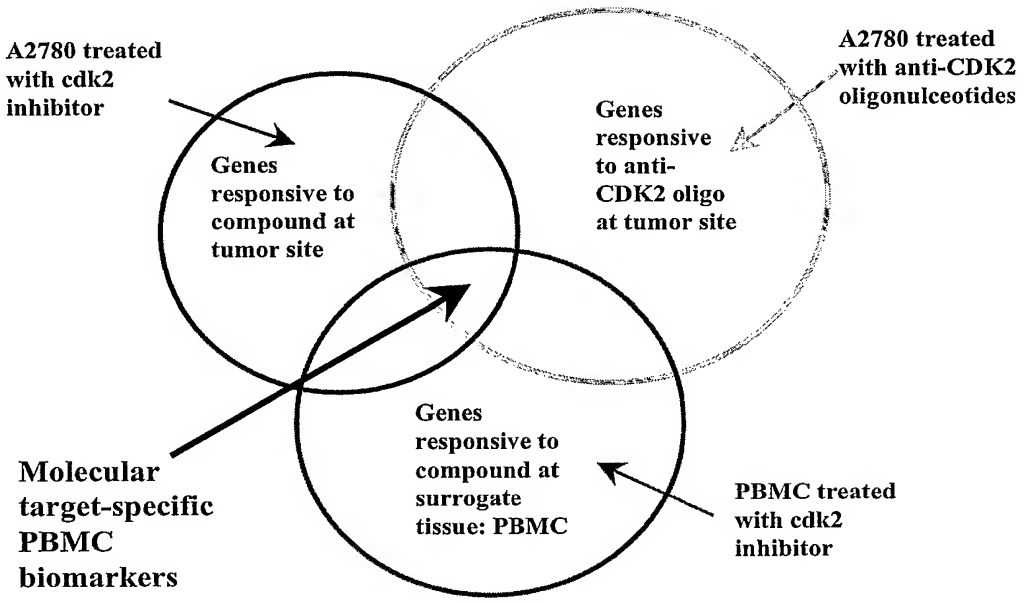
— *with international search report*

[Continued on next page]

(54) Title: BIOMARKERS OF CYCLIN-DEPENDENT KINASE MODULATION



(57) Abstract: Biomarkers having expression patterns that correlate with a response of cells to treatment with one or more cdk modulating agents, and uses thereof. Also provided are methods for testing or predicting whether a mammal will respond therapeutically to a method of treating cancer that comprises administering an agent that modulates cdk activity.

WO 2005/012875 A3

— *with sequence listing part of description published separately in electronic form and available upon request from the International Bureau*

(88) Date of publication of the international search report:
15 March 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/24424

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8): **C12Q 1/68**(2007.01);**C12M 1/00**(2007.01),**1/34**(2007.01)

USPC: 435/6,287.2
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 435/6,287.2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
STIC sequence search (SEQ ID NO: 1246), MEDLINE, CAPLUS, PCTFULL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/66719 A1 (Nakagawara et al) 13 September 2001 (13.09.2001), ABSTRACT ONLY, abs, SEQ ID NO:s 2071 and 2072.	1-10
A	US 6,783,961 B1 (Edwards et al.) 31 August 2004 (31.08.2004), SEQ ID NO: 11116	1-10
A	US 2004/0253606 A1 (Aziz et al.) 16 December 2004 (16.12.2004) entire document, SEQ ID NO: 3554, 7526	1-10

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search
22 November 2006 (22.11.2006)

Date of mailing of the international search report
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